Inter-American Economic Affairs

VOLUME VIII AUTUMN 1954 NUMBER 2

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British Investments in the Chilean Nitrate Industry

By J. Fred Rippy

The general impression that investors in the United Kingdom derived huge profits from the production and sale of Chilean nitrates requires considerable modification. Some Englishmen—perhaps a dozen or a score—made handsome fortunes, but the vast majority obtained no more than moderate returns and not a few suffered losses. By and large, the profits drawn by Britishers from Chile's nitrates may have been higher than those yielded by almost any other major type of British economic activity in Latin America; but this would signify big profits only if profits were high in most types of British investment in the region, and they were not.

A few instances of lavish profits in business seem to be long remembered while moderate gains or capital losses are soon forgotten. Men who rise suddenly from poverty or limited wealth to great riches are likely to occupy a permanent place in history's pages. Others, unless they attain fame in non-economic achievements, are consigned to eternal oblivion. The facts and the truth regarding foreign investments can be ascertained only by careful inspection, company by company, and in the case of the nitrate industry and many other categories of British economic operations in Latin America few have taken the pains to make such inspection and publish the results.[1]

It appears that the average individual rarely reveals intense curiosity regarding the manner in which millionaires accu-

[1] Statistics presented in this essay have been compiled from three main sources, each of them containing exhaustive company indexes: *Stock Exchange Year-Book* (called *Stock Exchange Official Year-Book* after 1933); *Stock Exchange Official Intelligence;* and *Register of Defunct and Other Companies Removed from the Stock Exchange Official Year-Book.* All three were published in London: the last in 1947, the first annually beginning with 1875, and the second also annually from 1882 until it was absorbed by the second in 1934. For further sources, consult my article on the activities of John Thomas North (the "Nitrate King") and his associates published in *Pacific Historical Review,* XVII (Nov., 1948), 457-65.

mulate their immense riches. With reference to the British nitrate millionaires, for instance, few have inquired whether they made their fortunes by virtue of shrewd investment and efficient business management or by means of security-market manipulation and excessive overcapitalization of nitrate assets. The truth of the matter seems to be that more profits were made at the expense of the unsophisticated British investor than by producing and marketing nitrate of soda. To some extent, both the Chilean workers in the nitrate regions and the consumers of the product in the outside world were fleeced, since the workers, even though they were paid somewhat more than the customary wage in Chile, gained no more than a bare living from their toil and sweat in the desert,[2] and since many efforts were made by company managers to reduce production and competition and maintain high prices for nitrate. But, to an even greater extent perhaps, fortunes were made at the expense of investors who were deprived of their savings by cleverly inducing them to buy nitrate securities at the peak and sell them at close to the bottom.[3]

British firms domiciled in Chile and Peru had been engaged in the nitrate industry for several years before the joint-stock phase of the industry began in the early 1880's. Enthusiasm for investment in joint-stock companies organized to operate in the Chilean nitrate fields, whipped up by John Thomas North, Robert Harvey, John Dawson, and their relatives, associates, and rivals, intensified and spread until it assumed the magnitude of a "boom" toward the end of the decade. The par value of the British investment in Chilean nitrates, including all types of securities and those of service as well as producing enterprises, exceeded £10 million by the end of 1890. The capital flow slowed down during the next decade, but the pace increased again shortly after 1900. The investment probably reached its maximum between 1913 and 1918, when it ranged from £28 to £30 million, figured at par and including the service companies. But the total investment over the years from the 1880's through the 1920's was appreciably larger, perhaps as much as £35 million, if the capital

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[2] See *Pacific Historical Review*, XVII, 464-65, and sources cited.

[3] *Ibid.*, XVII, 461-62; *Investors' Review*, II (1893), 332-36, and VI (1895), 117-19.

of all the ephemeral enterprises is added to that of the companies which survived for a decade and more. Including nitrate services organizations, some 50 British companies were founded during this period for the purpose of producing, servicing, and marketing Chilean nitrate of soda; but no more than 40 managed to avoid liquidation or reorganization for as many as 10 years, and the world depression that followed 1929, along with the production of synthetic nitrates, struck the natural nitrate business an almost fatal blow. A drastic reorganization, with Chilean government intervention, was inaugurated in 1931 and repeated in 1933. Prosperity did not even begin to return to this sector of Chile's economy until the early 1940's after war economies had greatly increased the demand for explosives. The face value of Chilean nitrate securities quoted on the British stock exchanges was £4,687,158 on April 4, 1949, and £3,385,730 on March 31, 1952. Although Britishers had sold some of their holdings at a good price to the Guggenheims, at least their paper losses of capital were large; but growing prosperity in the industry is suggested by the rise of market values during the same period from £6,059,962 to £20,821,729, an expansion of nearly £14.8 million.[4]

Table 1 presents the dividend records and ordinary capitalization at the time of liquidation (or reorganization, in some cases) of 22 British nitrate companies that failed to prosper. The first three were liquidated within less than 10 years from the date of organization; the rest survived for from 10 to 28 years. Nine returned no dividends to their ordinary shareholders, and 7 more, of ephemeral character, might have been

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[4] *Stock Exchange Official Year-Book* for 1952, p. 1791, and for 1953, p. 1581. These figures include only the quoted securities of the companies engaged in the production and sale of Chilean nitrate and iodine (a by-product). There were only 4 of these in 1952: Chilean Nitrate and Iodine Sales Corporation; Anglo-Lautaro Nitrate Corporation; Tarapacá and Antofagasta Nitrate Company; and Taratoca Investment, Limited. A fifth organization, Lautaro Nitrate Company, Limited, went into liquidation in 1951. British investors hold only a part of the securities of these corporations; the rest are owned by the Chilean government and by capitalists of the United States.

From tariffs levied on nitrate exports the Chilean government had long secured a good part of its revenues. Between 1880 and 1930 the annual average was nearly 43 per cent of the ordinary revenues of the national government, the maximum being almost 68 per cent in 1894.

added, raising the total to 16. Eleven others averaged 4 per cent and less; only 2 yielded an annual average of over 6 per cent. And these rates, based on the par value of the capital dealt with, take no account of capital losses, which probably aggregated no less than £3 million, including losses of preferred shares and debentures issued by a few of the companies.

Table 2 exhibits the par value of the ordinary shares and the dividend records, calculated on the basis of par values, of 20 prosperous British nitrate companies active in Chile. It will be observed that 6 of the group returned annual averages of no more than from 6.9 to 9.9 per cent for periods of from 17 to 40 years. The median for the other 14 ranged from 10.2 to 50.7 per cent, rising above 20 per cent in only 4 instances. Figures for yields take no account of capital losses

TABLE 1

BRITISH NITRATE COMPANIES OPERATING IN CHILE: FAILURES AND NEAR FAILURES

Company	*Organized*	*Liquidated*	*Nom. Share Cap. at Liquidation*	*Average Annual Return %*
Andrade	1925	1931	£ 108,169	nil
Britannia	1906	1910	200,000	nil
Buena Ventura	1913	1920	63,522	nil
Consolidated	1893	1903	140,070	4.0(?)
Esperanza	1899	1925	21,000	nil
Florencia	1904	1913	80,000	nil
Fortuna	1908	1920	154,000	3.3
Ghizela	1906	1919	150,000	nil
Jazpampa Bajo	1902	1917	200,000	nil
Lagunas	1894	1931	207,500	2.3
Lagunas Syndicate	1895	1930	550,000	2.7
Leonor	1906	1916	170,000	nil
Lilita	1907	1918	100,000	nil
Primitiva	1886	1899	40,000	6.7
San Donato	1889	1908	160,000	2.7
San Pablo	1888	1904	160,000	3.9
San Patricio	1904	1925	100,000	2.4
San Sebastián	1889	1931	143,750	2.3
Santa Elena	1889	1906	107,875	1.5
Santa Rosa	1901	1912	169,850	0.7
Tarapacá and Tocopilla	1906	1930	1,000,000	6.1
Zapiga	1906	1923	80,000	0.3
Total Capital			£4,105,736	

following 1929, but this omission is largely counterbalanced by the exclusion of share bonuses in the calculation of rates.[5]

Table 3 deals in a similar manner with the nitrate service companies, numbering 6 altogether, including the Taltal Railway Company, which was largely engaged in the shipping of nitrate, and excluding the Antofagasta and Bolivia Railway, which hauled some of this product. Only one of this group, Nitrates Provision Supply Company, was a complete failure, paying a nominal annual average of only 1 per cent for a period of 16 years and losing more than half of its capital at the time of liquidation; but the Bank of Tarapacá and London

TABLE 2

PROFITABLE BRITISH NITRATE COMPANIES OPERATING IN CHILE

Company	*No. of Years*	*Initial Year*	*Annual Average Return*
Aguas Blancas	21	1909	24.8%
Alianza	31	1899	20.1[1]
Amelia	17	1908	9.0
Angela	28	1902	14.6
Anglo-Chilian	23	1902	16.0
Barrenechea	24	1905	9.9
Colorado	32	1886	10.2
Lautaro	41	1889	10.5
Liverpool	45	1885	50.7
Loa	22	1908	17.1
London	38	1888	35.2[2]
New Paccha and Jazpampa	29	1901	12.8[3]
New Tamarugal	24	1906	11.5[4]
Pan de Azugar	26	1904	11.3
Rosario	40	1890	7.3
Salar del Carmén	31	1898	17.8
San Jorge	21	1889	9.0
San Lorenzo	17	1903	15.0
Santa Catalina	29	1901	19.5
Santa Rita	38	1892	8.6
Santiago	28	1900	6.9

[5] From 1890 until 1925, residents of Chile controlled from 30 to 45 per cent of the Chilean nitrate industry. At least one company, the Antofagasta, paid a nominal annual average of 67.3 per cent for the years 1913-1920 on ordinary shares with a face value of 16 million pesos. It then distributed a 500 per cent share bonus and sold out at par to Lautaro!

PAR VALUE OF ORDINARY SHARES AT BEGINNING AND END OF DIVIDEND PERIOD

Company	*Beginning*	*End*
Aguas Blancas	£210,000	£ 375,000
Alianza	500,000	500,000
Amelia	156,000	156,000
Angela	70,000	70,000
Anglo-Chilian	150,000	350,000
Barrenechea	45,000	45,000
Colorado	160,000	160,000
Lautaro	300,000	8,000,000[5]
Liverpool	110,000	526,000[6]
Loa	450,000	1,300,000[7]
London	50,000	200,000[8]
New Paccha and Jazpampa	41,000	68,700
New Tamarugal	195,000	1,000,000[9]
Pan de Azugar	110,000	110,000
Rosario	600,000	600,000
Salar del Carmén	109,500	220,000
San Jorge	375,000	300,000
San Lorenzo	120,000	24,000
Santa Catalina	79,000	79,000
Santiago	200,000	160,000
Santa Rita	96,300	100,000

[1] Succeeded company of same title, organized in 1895.
[2] There is uncertainty regarding the dividends of this company for 1888, 1889, and 1903-1905.
[3] Succeeded Paccha and Jazpampa, organized in 1889.
[4] Succeeded Tamarugal, organized in 1889.
[5] Share bonus of £150,000 in 1923; further expansion to acquire other property.
[6] Share bonus of £219,206 in 1922.
[7] Share bonus of £650,000 in 1922.
[8] Share bonus of £ 80,000 in 1912.
[9] Share bonus of £273,000 in 1926; further £450,000 issued in payment for London Nitrate Co.

(later called Anglo-South American) seems to have lost all of its capital in 1936.

Although the Bank of Tarapacá and London turned out in the end to be unprofitable and probably caused the shareholders of two other banks which it absorbed—Anglo Argentine and London Bank of Mexico and South America—to suffer capital losses, the British investment in commercial banks was one of the most profitable of British investments

TABLE 3

BRITISH INVESTMENTS IN CHILE: THE NITRATE SERVICE ENTERPRISES

Company	*No. of Years*	*Initial Year*	*Annual Average Return*
Bank of Tarapacá and London	46	1890	7.8%
Nitrate Producers' Steamship	47	1896	10.6
Nitrates Provision Supply	16	1889	1.0
Nitrate Railways	43	1887	8.0
Taltal Railway	44	1886	6.1
Tarapacá Waterworks	42	1888	8.6

PAR VALUE OF ORDINARY SHARES AT BEGINNING AND END OF DIVIDEND PERIOD

Company	*Beginning*	*End*
Bank of Tarapacá and London	£ 500,000	£5,632,670
Nitrate Producers' Steamship	100,000	156,300
Nitrates Provision Supply	100,000	100,000
Nitrate Railways	1,200,000	2,291,670
Taltal Railway	307,750	1,200,000
Tarapacá Waterworks	400,000	160,000

in Latin America. The major commercial banks[6] organized in the United Kingdom for operation in Latin America are exhibited in Table 4. Rates of return are for ordinary shares, the only securities issued by most of these banks, and are based upon par values. The years dealt with have been selected, as far as possible, for purposes of comparison with the profits of the nitrate companies during their most prosperous periods of operation.

[6] Although Britishers held minority investments in some commercial banks dominated by others, they never controlled any of major importance besides those listed in this table. Among the few minor banking firms which they owned at one time or another in Latin America were: British Bank of Central America, liquidated in 1883; Mercantile Bank of the River Plate, dissolved in 1881; and Mercantile Bank of Peru, dissolved in 1884. They held a minority interest in a very profitable Central American banking organization, Anglo-Central American Commercial Bank, founded in 1914 and liquidated in 1936, with practically no loss of capital. For a period of two decades the dividends on its ordinary shares, £55,002 at par, averaged over 14 per cent. Founders' shares, with a par value of £300, paid a nominal annual average of 879.8 per cent!

TABLE 4

THE BRITISH COMMERCIAL-BANKING INVESTMENT IN LATIN AMERICA

Bank	*No. of Years*	*Initial Year*	*Annual Average Return*
Anglo Argentine	11	1890	4.7%[1]
Bank of Tarapacá and London	40	1890	8.6
Commercial Bank of Spanish America	25	1905	3.1[2]
English Bank of Rio de Janeiro	46	1884	10.1[3]
English Bank of the River Plate	8	1883	8.0[4]
London and Brazilian	44	1880	13.6[5]
London and River Plate	44	1880	15.4[6]
London Bank of Central America	24	1894	4.3[7]
London Bank of Mexico and S. Am.	30	1883	8.6[8]
Bank of London and South America	6	1924	10.2[9]

PAR VALUE OF ORDINARY SHARES AT BEGINNING AND END OF DIVIDEND PERIOD

Bank	*Beginning*	*End*
Anglo Argentine	£ 250,000	£ 350,000
Bank of Tarapacá and London	500,000	5,632,670
Commercial Bank of Spanish America	90,740	500,000
English Bank of Rio de Janeiro	500,000	1,000,000
English Bank of the River Plate	500,000	500,000
London and Brazilian	500,000	1,500,000
London and River Plate	600,000	2,040,000
London Bank of Central America	137,850	27,570[10]
London Bank of Mexico and S. Am.	250,000	480,000
Bank of London and South America	3,540,000	3,540,000

[1] Assets purchased early in 1901 by Bank of Tarapacá and London, which paid the shareholders £1 and 10 shillings cash, plus one £5 share, for each £7 share.

[2] Commercial Bank of Spanish America was finally liquidated in early 1904 without loss to shareholders.

[3] Called British Bank of South America after 1891; finally liquidated in 1936, probably without much loss of capital.

[4] English Bank of the River Plate was a victim of the Argentine panic that began in 1890; shareholders probably lost a good part of their capital.

[5] Assets acquired in 1923 by Bank of London and South America; shareholders were paid 2 shares of £5 for each £10 share.

[6] Title became Bank of London and South America after consolidation with London and Brazilian Bank.

[7] Liquidated in early 1918; shareholders received £1 and 1 shilling for each £1 share.

[8] Assets acquired in 1912 by Tarapacá and London (Anglo-South American Bank). Shareholders were handsomely rewarded, receiving £8 in cash, plus a £5 share, for each £6 share. But they finally lost a good part of their Bank of Tarapacá and London shares.

[9] This bank was still active in 1952, when the par value of its shares stood at £5,050,000. Dividends for 1947-41 averaged 6.5 per cent.

Product Profiles and National Income: A Method of Studying Economic Change in Under-Developed Countries

By EASTIN NELSON*

The purpose of this paper is to outline a simple methodology for the study of economic change in countries whose basic data are partially unavailable or the reliability of whose published price and income data is uncertain for the investigator. Such a methodology must accept as basic the bedrock of unyielding distrust of national income estimates and price indices which invariably comes to light when economists attempt to assess economic change in a country whose basic statistics are inaccessible or are cast in unfamiliar terms.

The simplest formula for measuring economic growth and comparative economic welfare runs in this order:

1. National income or product series.
2. Retail price or cost of living series.
3. Real national income (number one divided by number two).
4. Real per capita income (number one divided by census series or population estimates).

Unfortunately, confidence in this method or in any similar method involves acceptance of the original estimate, and confidence in the consistency of the deflator. All economists are aware that the measurement of national income is not a precise science even in the countries where it is best developed. The number of imputed prices entering the estimates in underdeveloped countries, the difficulties of valuation of some elements in the tertiary sector, and above all the number of rule-of-thumb decisions inevitably involved in the measurement of an evolving national product are too well known to admit debate. The number of indirect lines of evidence which

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must be accepted in income accounting is frequently cited in objection to their use.

Obviously the economist who is skeptical of national income estimates and price indices because of insufficient access to basic data will not be willing to accept new indices and new national income figures based on data less adequate than those available to the original computers. The method here proposed is the reverse of such a procedure—that is, to break down accessible sectors of the national product into partial but significant and verifiable profiles of components. Such partial components are based on quantum figures of agricultural and industrial production, and transportation.

The figures by which it is proposed to test the usability of national income figures are profiles of quantity relatives of commodities and services chosen for their verifiability and for their representative character. An arithmetic mean is calculated for the 1934-38 base period for each commodity or service. A post-war mean of the last three years for which data are available is then computed. The quantity relative is the post-war mean computed as a percentage of the pre-war mean. Arranged in Appendices A and B, these relatives go far toward describing both the rate and the range of economic change in the two national economies treated substantively.

Such profiles do not have the clean mathematical sharpness of index figures, but neither do they suffer from the vulnerability of figures purporting to measure the whole of national income. In the main, the profiles herein presented are calculated from figures on which multiple checking is feasible. Industrial production figures in most of the "under-developed" countries of the world are so well known to the men in the trade that neither falsification nor error is likely to occur in published form. Likewise, the figures on agricultural production involving any degree of industrial processing are subject to verification by agencies which could not be easily or grossly deceived as to the figures. For example, world sugar economists and sugar traders in general, and equipment purveyors in Mexico City in particular are as fully informed as to the prospects and progress and the quantity of the annual sugar grind in Mexico as are the government's statisticians. Cotton and cotton seed harvest tonnages in Argentina are known as accurately, and virtually as soon, in Houston and in Liverpool as in Buenos Aires. The same general proposi-

tion is true of industrial consumption figures. Cement producers and purveyors of electrical machinery are at all times fully informed about production in their respective lines. Perhaps the same degree of certitude does not obtain with respect to kilometer passenger and freight figures, but again it is doubtful that large-scale users of such services can be easily and grossly deceived. The lack of sharpness in the profile method is in part its strength. Its members, not being intervolved in indirect calculation, do not stand or fall together. They stand as a group, reflecting a trend, but no one of them is indispensable. Any defective member can be discarded without invalidating the general result.

In no sense are the profiles designed to produce indices. It would be possible, of course, to make short indices of agriculture and manufacturing from the data used in such sector profiles; but presently available indices of agriculture and industry are more defensible than any that could be computed in an extra-territorial investigation. If it can be established that they are fairly representative of the trends indicated in their respective sector profiles, then they are usable gauges of economic change. However, the usefulness of the component profiles is not destroyed if they contradict rather than verify the indices. Likewise, the profiles as a whole do not stand or fall by their failure to verify a real national income or product series. The profile method is potentially useful in the measurement of economic growth at four alternative, though not necessarily mutually exclusive positions: (1) verification of the usability of available indices of national income and product, (2) modification of available estimates and indices, (3) amplification and extension of the profiles as a base for a more adequate series of measurements, (4) indication of the rate and range of economic change in the primary and secondary sectors.

Correlative with the methodological objective, this investigation is concerned to measure tentatively some of the results of the revolution in economic policy which has been under way in parts of Latin America from the turn of the century and which became generalized to most of the region after 1931. One of the consistent trends seems to have been a comprehensive turning-away from international liberalism, together with a refocusing of economic policy to embody a principle nowhere more succinctly expressed than by Professor Kuznets:

". . . The bulk of economic activity is domestically originated and oriented."[1]

This revolution in policy is not peculiar to Latin America, though it has peculiar aspects and a definitiveness that is lacking in most other under-developed regions. In a very important sense, the Latin American movement has involved the adaptation of the institutions and resources of the under-developed countries to the industrial system, which has so obviously improved long-run productivity and welfare in the countries where it has developed.

The world community of industrial nations, notably the United States, has, in spite of occasional protests about the rights of foreign investors and about the proper proportioning of factors, acquiesced in the industrialization of the under-developed countries, permitting them to write their own terms and abetting them materially with credits and technical help where their terms do not run too sharply at variance with the rights of foreign investors and the accepted norms of western political democracy. This movement has been marked by undeniable, though by no means uniform and universal, success.

This process of adaptation has been marked by zealous industrial nationalism and by no little national intervention and initiative in industrial investment and management. National governments in Latin America are presently involved in promoting no less than eight basic steel plants, to take one example of the recourses by which ambitious peoples attempt to lift themselves by their pre-industrial bootstraps. This continental movement is motivated by a pervasive and ponderous overtone—economic growth. The under-developed nations to the south of us have not merely adopted the more dramatic devices of hydro-electric installations and steel plants. One or another, they are intervening by planning and by channeling investment funds in almost every aspect of economic activity within national frontiers and in some instances are engaging in limited inter-state planning for growth.

The economists and engineers of the areas of technological radiation have frequently been violently critical of specific projects and not infrequently of whole regimes. Their dissent

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[1] Simon S. Kuznets, "The State as a Unit in the Study of Economic Growth," *The Journal of Economic History*, Vol. XI, No. 1, pp. 25-41.

has sometimes inhibited and has frequently modified policy in under-developed countries. Seldom has it contributed materially to deter the progress of the industrialization movement in the Latin American countries large enough to have indigenous politics or a viable domestic market balance.

The revolution in economic policy in Latin America has proceeded partly by rule of thumb and partly by experiment, though generally the experimenters have been off to a new phase of policy adaptation before collating the data of the last. Unscientific as it may seem, this is perhaps the inevitable *modus operandi* of socio-economic experimentation. It is, however, the position of this paper that to some degree the results of socio-economic experimentation can be and should be subjected to empirical measurement. The primary objective, then, is methodological. The substantive objective is secondary.

The attempt to formulate this method owes something to Professor Kuznets, who suggests a frame of reference for evaluating economic change. Emphasizing the importance of working within a homogeneous phase of history, he suggests the two-hundred-year impact of the Industrial Revolution as a proper phase and suggests the sovereign state as the unit which will permit of unequivocal identification, in setting up the measurements of change.[2] The writer agrees with Professor Kuznets on the importance of phasing, on the impact of the industrial system as a proper historical phase, on the manageability of the national state as a unit, and on the importance of quantitative measurement in determining the rate and the range of economic change. Attacking a two-hundred-year sweep or even the entire impact of the industrial system is far beyond the resources of this paper. Instead, it deals with a single short-run phase of the impact.

The first problem, from the standpoint of the proposed methodology, as well as from the standpoint of evaluation of a manageable aspect of the revolution, is to set up areas of "unequivocal identification" and a time and impact phase in which to arrange the measurements of change. Only two national economies, Mexico and Argentina, offer sufficiently continuous national income and component accounting series

[2] *Ibid.*

to make such a study feasible within the limits of this paper. They have been selected for separate but comparable treatment, testing the impact of the policy of reorientation from internationalism to domestic economic development, which has come to characterize the continent. The two countries did not enter the purview of the revolution at the same time nor from the same base. Argentina entered the first phase of the move ment with serious interventionist exchange control and agricultural subsidies during the early thirties. Mexico entered the acute second or nationalization phase, which soon brought her into conflict with international capitalism, in 1934. Argentina entered the second phase about 1945 and has not yet emerged from it. This conflict stage is confused with a number of frictions which make objective measurement difficult, rendering Argentina in certain respects a somewhat less apt subject for analysis than Mexico. Argentina compensates for these difficulties in that she entered the revolution with a more mature economy from the standpoint of specialization and exchange, and consequently affords more numerous lines of statistical evidence. Already well into the third, or consolidation, phase of her revolution, Mexico still offers a less satisfactory subject than Uruguay, from the point of view of maturity of the movement, that country having entered its consolidation phase about 1920. However, the decisive issue, methodologically, is that both Argentina and Mexico have price and income series running back to adequate pre-war bases. Their primary and secondary production series are also longer and broader than those of other Latin American countries, and they have the semi-continental scope which lends itself to experiments in industrialization. From the point of view of their low ratio of reproducible capital, both qualify as under-developed countries and both have large, under-developed gaps in their resource patterns.[3]

Both Argentina and Mexico are also affected with a comparatively high concentration of economic activity in the primary sector of national income, as is revealed by the following table of percentages of estimated net income by industrial major categories:

[3] Cf. Shigeto Tsuru and Kazushi Ohkawa, "Long-Term Changes in the National Product of Japan," pp. 19-44; and Daniel Creamer, "Uses of National Income Estimates in Under-Developed Countries," in *Income and Wealth*, ed. Milton Gilbert.

	Argentina (1945)	*Mexico (1948)*
Agriculture	24	20.4
Mining	1.8	8.7
Manufacturing	21.3	22.5
Construction, Transfer, Communications	12.7	10.9
Commerce	23.8	23.8
Others	16.4	15.7[4]

The figures on the checking profiles represent, partially, fifty to sixty percent of aggregate economic production in the two countries. That is to say, from these data short indices on agriculture, manufacturing, and transportation could be derived. Some forty percent of the national production has been excluded from the profiles. This does not mean in any sense that the investigator regards the service aspects of aggregate income as unimportant to the total production of the nation or to the welfare of its citizens. It merely means that the reliability of measurements in these categories is uncertain and beyond the resources of the instruments as proposed.

Obviously an essay testing the usability of national income and price indices by their articulation with components must accept severe limitations aside from those outlined above in the selection of verifiable lines of evidence. It must avoid all price phenomena except for strictly limited purposes, for these tend to reflect a general inflationary bias. The substantive aspect of the investigation also imposes limitations, since it is attempting to evaluate in a general way the results of a changing revolution not identifiable until after 1931. No statistical sequences which did not begin before 1938 and carry through 1946 have been processed. With few exceptions quantum figures are subject to a double check. This means elimination of all types of production subject to any considerable proportion of self-supply, except a few agricultural commodities which bulk very large in national income and on which estimators would have much better than average information. Figures on fish, milk, eggs, and fowls for both countries have been disregarded in the component profiles because of the uncertainties of estimating self-supply. Mexican figures

[4] *National Income and Its Distribution in Under-Developed Countries*, Table 3, United Nations, Statistical Papers, Series E, No. 3.

on meat, cheese, and butter have been discarded on the same grounds.

Under these limiting criteria, the investigation was not only forced to disregard many sequences, but to avoid extrapolations which would be obligatory for the national income accountant. Total milk supply in Argentina, for example, is a most important aspect of production and welfare in that country. Figures published for 1934-38 and for 1947 indicate that increase in the total milk supply has been very substantial.[5] The more defensible figures used in this study, milk delivered to dairies,[6] might be combined with this series, extrapolated by weighting against the number of cows reported in the livestock censi of 1937, 1947, and 1952, and built into a defensible sequence of milk production which would be a necessary and desirable aspect of national income accounting and of the index of real income. Such a process is not the task of this paper. It is to be assumed that the estimators of national income have already resorted to such processes. For dairy production in Argentina this paper makes use of three measures which it regards as reliable: factory production of butter and of cheese, and milk delivered to dairies.

The index figures in the tables presented as Appendix A and Appendix B were calculated in the following manner: real income figures were calculated by dividing each year's income or product by its corresponding retail price index. A mean of the real products for the years of the base was then computed, as was the mean for the three-year post-war period. The post-war relative was calculated as a percentage of the pre-war base. The agricultural indices, calculated by the United Nations Statistical Office on the 1934-38 base, were borrowed from the Yearbook. The industrial indices, calculated by the same office on a 1948 base, were reduced to post-war relatives by dividing the mean pre-war index into the mean post-war index.

In calculating the quantity relatives it was necessary in some cases to use a shorter base than 1934-38, within the same

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[5] Office of the United Nations Department of Statistical Affairs, *Statistical Yearbook, 1951*, Third Issue, Table 32: Milk, p. 114.

[6] Food and Agriculture Organization of the United Nations, *Yearbook of Food and Agricultural Statistics—1947*, Table 45, p. 145.

period. The bulk of the post-war quantity tables were based on 1949-51 means, though it was sometimes possible to get 1952 figures, and in cases of crop oscillations of considerable magnitude, four- and five-year post-war means were used. Such exceptions are noted in the tables. For Argentina forty-three and for Mexico thirty-eight relatives have been selected as reasonably representative of the primary and secondary sectors, and as of reasonably reliable measurement.

The Argentine relatives are divisible into five major groups: (1) Fuels and power, (2) industrial consumption and production, (3) agricultural production, (4) livestock censi, (5) transportation. The Mexican profile includes the same five major groups, and adds a sixth, metal mining. A larger number of quantity relatives are subsumed under fewer main categories in Argentina, which makes it evident that a larger number of reliable and significant sequences for industry and agriculture may be found in Argentina than in Mexico. Argentina relies, to a much greater degree than does Mexico, on industrially processed foods such as cheese, butter, dairy-handled milk, and packing-house or abbatoir-accounted meat, and it is these relatives which enlarge the Argentine profile, in spite of the absence of the metal mining and metallurgical categories.

Most of the general indices and the great bulk of the quantity of production figures were taken from the *Statistical Yearbook of the United Nations* for 1950-51 and 1952, and from *Sintesis Estadistica Mensual,* monthly Argentine bulletin, and from *Mexico en Cifras, 1952.* Argentine milk figures were taken from the *Yearbook of Food and Agricultural Statistics for 1947* of the U.N.-F.A.O. The figures on the 1952 livestock census of Argentina were taken from the April and May issues of *Comments on Argentine Trade,* monthly journal of the United States Chamber of Commerce in Argentina. The national income figures for Mexico were taken from *International Financial Statistics* for May, 1953.

The most striking aspects of the Mexican general indices are the rise of real national income and of the manufacturing index, by 73 percent and 98 percent respectively. This might appear to be inconsistent when it is noted that the agricultural index rose only forty-eight percent during the twelve years between the mid-point of the base period and the mid-

point of the post-war period, particularly when it is remembered that some sixty percent of the population of Mexico are engaged in agriculture. However, the possible discrepancy becomes less significant when it is noted that only twenty percent of Mexican national income derived from agriculture in 1948. It may be noted, moreover, that the share of national income imputed to agriculture, forestry, and fishing declined steadily from twenty-five percent to less than twenty percent between 1939 and 1950.[7] In the light of these proportions, a gain of seventy-three percent in real national income does not appear inconsistent with the change in the status of agriculture. The very magnitude of the rise in the retail price index from 24.6 to 105.6 introduces an element of uncertainty that weighting and pricing can have been kept in reasonable balance with rapidly growing new aspects of national income.

Evidence from the fuel and power sector tends to corroborate to some degree the large growth in national income and industrial production. The increase in the use of electricity by 100 percent indicates a considerable shift of manufacturing from handicraft to industrial production and to an increase of scale. The ninety-five percent increase in energy consumption is larger than the growth of real national income. The increase of the petroleum refining index by eighty-eight percent may be somewhat less than a perfectly valid figure since it occurred during a period when petroleum shifted from an export to a domestic basis.

Of the ten quantity relatives in the industrial category, one shows a drastic loss, two show gains which would be considerably less than proportional to the population gain, one shows a gain of fifty-eight percent, and six show gains ranging from 121 to 400 percent. The indices showing gains less than proportional to population gain—cotton consumption, the production of cotton fabrics, and footwear are old industries, which were once Mexico's giants but which have failed to keep pace, because of changing consumption patterns involving both foreign and domestic competition. From available figures it is not possible to construct meaningful pre-war and post-war relatives on rayon yarns and fabrics. It is worth noting, however, that the tonnage of rayon filament yarn produced in Mexico in 1951 was equal to a quarter, by weight,

[7] *International Financial Statistics*, May, 1953, p. 197.

of the cotton fabrics produced.[8] It was also impossible to get satisfactory data on woolens, but comparative data on cotton and rayon indicate that a combined index on textiles would show gains approximating population growth, but not of the order registered in heavy industry and in food processing.

The 400 percent gain in beer production represents a dietary change that is in some degree general to the western hemisphere, whether it be called a rise in nutritional levels or an adaptation to industrial stresses. This is not a large percentage gain in a new and insignificant industry, but a solid gain in an old industry which put Mexico among the ten top beer-producing nations of the world. Mexico's 121 percent gain in sugar production is another phenomenon of the rising level of consumption and production on a par with the progress of the industrial system. It is a significant gain depending on modern machinery in an old industry in which Mexico has always been relatively self-sufficient.

The heavy industry indices related to steel show large gains in production as well as in consumption. Undoubtedly a true steel relative with a 1934-38 base would have revealed a very much higher percentage gain, and a 1952 relative over such a base would be of much greater magnitude than the 155 percent gain registered. The pig iron-ferry-alloy relative is of the same general order of magnitude and is likewise a fraction of the production which will obtain when present construction in Monclova is completed. Though no effort has been made to assemble complete figures on employment in steel and related industries, it may not be argued that the iron and steel industry is insignificant, in the light of the fact that Altos Hornos alone employs currently 3100 men in production. The three hundred forty-five percent gain in cement production is far out of proportion to growth in national income. Mexico's cement industry is among the world's fifteen largest and since it is closely related to a much larger industry, must be reckoned as a significant barometer of industry's contribution to the rising national income. It undoubtedly reflects a similar growth in building, in which urban housing and industrial construction have played large roles. Seen as pillars in a rising capital goods industry, steel and cement have added

[8] Cf. pp. 177, 183, *Statistical Yearbook*, U. N. 1952.

point of the post-war period, particularly when it is remembered that some sixty percent of the population of Mexico are engaged in agriculture. However, the possible discrepancy becomes less significant when it is noted that only twenty percent of Mexican national income derived from agriculture in 1948. It may be noted, moreover, that the share of national income imputed to agriculture, forestry, and fishing declined steadily from twenty-five percent to less than twenty percent between 1939 and 1950.[7] In the light of these proportions, a gain of seventy-three percent in real national income does not appear inconsistent with the change in the status of agriculture. The very magnitude of the rise in the retail price index from 24.6 to 105.6 introduces an element of uncertainty that weighting and pricing can have been kept in reasonable balance with rapidly growing new aspects of national income.

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[8] Cf. pp. 177, 183, *Statistical Yearbook*, U. N. 1952.

importance in an economy affected with a low ratio of reproducible capital.

It cannot yet be said with certainty from the industrial profile presented here that manufacturing growth has been as large as the index indicates—98 percent from pre-war to post-war. No satisfactory pre-war and post-war relatives for the new industries can be constructed from the available bibliographical sources. Some conception can be had of the growth of the industries which are not covered by the relatives from a few data extracted from an official publication comparing figures for 1939 and 1950.[9] Fabulous gains in chemicals, paper products, electrical apparatus, glassware, rayon, and certain durable consumer goods such as washers, coolers, and stoves, are impressive in the aggregate. Gains of 100 to 300 percent were recorded in industries with more substantial bases, such as food preserving, moving picture equipment, tires, cameras. It is not suggested that these indirect and fragmentary data have the same weight as those larger industries treated in more systematic fashion. It is reasonable, however, to conclude from them that a great volume of industrial production too new to account in the form elected for this paper, is arising to substantiate the manufacturing index of 198 for 1949 over the 1934-38 base. It is worth noting that a large proportion of new investment is going into industry basic to the rapid rise in the production of durable consumer goods and capital goods. The tremendous rise in food production and processing, coupled with lesser rises in wearing apparel, is suggestive of Zimmerman's conclusion that

> Once a group has reached the cheapest and lowest physical maintenance food standards, increases in income are at first associated with rapidly increasing food expenditures, later with slowly increasing expenditures and finally with stable or decreasing food expenditures.[10]

It would seem to portend a more satisfactory future for clothing and durable consumer goods industries as the diet becomes more adequate for the rural masses. We must con-

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[9] Secretaria de Economía, Dirección General de Estadistica, *Mexico en Cifras 1952*, Mexico, 1952, Lámina 14.

[10] Carl C. Zimmerman, *Consumption and Standards of Living*, D. Van Nostrand Co., Philadelphia, 1936, pp. 114-115.

clude that we are not dealing with a finished phase of history, but with a preliminary term of a more significant phase, which will require time to work out. Corroborative of this conclusion are many newly completed projects such as the mechanized coal mine at Palau, or under construction, such as the expansion of steel facilities at Monclova, or still on the drawing-boards, such as the new lowshaft steel mills projected at Durango and Oaxaca.

Eight agricultural commodities are included in the profile. With two exceptions, they are subject to the double checking of industrial processing. Corn and potatoes are included with some misgivings as to the precision of production figures, and must be justified on the basis of their importance in the national production figures. In spite of the probability of a considerable margin of error in the estimation of self-supplied corn, the intensive corn campaign carried on during the decade of the 1940's can be relied on to have put the estimators more closely in touch with the yield than would otherwise be the case. Since it is often estimated that from half to two-thirds of Mexico's cultivated land is in corn, no estimate of agricultural growth would be useful without some consideration of that cereal. The potato crop is not subject to industrial processing as are six other crops included here, but it is a commercial crop which moves in the market in sufficient proportion to justify the hope of reasonably reliable estimates.

Among the eight agricultural relatives calculated, corn is the big tonnage leader, though at world prices its annual value was roughly equal to that of cotton produced during the years 1948 to 1950. Cotton, with a gain of 270 percent in the post-war relative, paced all other crops. If cotton seed be included, the aggregate value of the cotton crop is considerably greater than that of the corn. The corn relative exceeded its pre-war base by 88 percent. Wheat and coffee increased moderately, but tobacco, rice, and potatoes show gains on the order of one hundred percent.

The crops for which no satisfactory quantity pairs could be computed constitute a minority of agricultural production, but they are a very sizable minority. Scattered indications are that they would reflect gains on the order of one hundred percent from the mid-point of the base to the mid-point of the relative. Sugar cane, whose ten million ton annual har-

vest exceeds by weight all the crops profiled,[11] shows slightly less than a hundred percent gain from 1940 to 1948, but if sugar and alcohol production figures are to be relied upon its quantity relative for the twelve-year period would be substantially in excess of this figure. No effort has been made to calculate figures for henequén and beans, whose gains have probably been considerably less than the standard, but their slow rate of growth will almost certainly have been balanced by the fabulous rates of increase of crops like tomatoes.

More than sixty percent of Mexico's gainfully employed are still in agriculture, though the proportion has been declining along with the rise of field crop production. In the light of the figures and tonnages cited above, which represent nine-tenths of Mexico's agricultural production, both by area involved and by value, it seems not unreasonable to postulate a rise on the order of one hundred percent in the constant peso value of field crop production in Mexico during the period under scrutiny, though the total agricultural index shows only a forty-eight percent rise.

The Mexican livestock figures, on the contrary, show little growth for hog and sheep herds and a drastic decline in the cattle population. No figures satisfactory for meat or wool relatives are available, or for milk, cheese, or butter. Unquestionably the aftosa campaign reduced farm income from the cattle herd, and restocking has absorbed a proportion of the income since aftosa came under control. The pre-war figure on commercial production of beef and veal was placed at 151,000 metric tons yearly. A rough estimate of fifty percent meat would place the number of live-weight beeves slaughtered at 300,000. No satisfactory price estimates for Mexico are available, but ratios derived from Argentine prices for 1952 indicate that one ton of ginned cotton is equivalent in value to 2.8 tons of live-weight yearlings. If this estimate is anywhere near accurate for Mexico, the post-war gain in ginned cotton was equal to three and one-half times the value of the entire pre-war commercial slaughter of beef. But of course, commercial beef production never ceased. It is doubtful that it declined significantly. What did decline, of course, was the export of live cattle to the United States, and this was not an insignificant sector of farm income. The investigator

[11] *Mexico en Cifras 1952.*

is forced to the conclusion that the Mexican agricultural index of 148 for 1948-50 is extremely conservative, though in extenuation it may be said that the index rose in each successive year, ending with 155 for 1950.

It is no part of the task of this paper to examine the means by which the revolution in policy is being achieved, but this rate of increase in a country with a low ratio of capital to population requires some explanation. It lies in the creation of new land through increased storage of surface water, in the application of machinery to cultivation and harvesting, in the application of science to selection of seeds and strains, and in the redistribution of land among small holders for more intensive cultivation. *Mexico en Cifras for 1952* estimates that the area harvested for 1948 was larger than that harvested in 1940 by more than a million hectares, or by about twenty percent. The eighty-eight percent increase in the corn yield is attributable in large part to the government's experimentation with and distribution of hybrid seed and other higher yielding types of corn. The agricultural system has been almost completely overhauled since 1934, and it is possible that agriculture suffered a slight setback during the base years, with wholesale expropriation of farm lands. It is estimated that a third of the farm population held ejido lands by 1940,[12] and if to these be added the new *colonos* it may be calculated that more than half of agricultural production is in the hands of small holders.

In mineral ore production, the post-war relatives range from drastic declines in the volume of gold and silver produced to a gain of some 254 percent in the production of iron ore. Lead showed an insignificant gain, and the fifty-four and fifty-eight percent gains in copper and zinc were somewhat below the rate of gain in national income. Iron ore is significantly the only metal whose production and use are domestically originated and oriented. More than eight percent of the national product derives from mining and the diminution in the production of foreign-oriented metals can mean a real subtraction from national income if it is not countered with increases in domestically oriented coal and iron. In the short run there is every indication that new investment for the exploitation of coal and iron has far more than offset the

[12] *Ibid.*

tendency of the foreign-oriented metals to lag behind the general rate of growth in the national income. This offset has already been noted in connection with the heavy industry sector.

The growth in manufacturing and the growth in agriculture offer an adequate base for the conclusion that real income growth of seventy-three percent is a conservative figure in the primary and secondary sectors. More than one-half of national income, however, evidently arises in the tertiary sector, including commerce and public expenditures. For this paper, these must remain somewhat uncertain so far as their total increase is concerned. Federal expenditures, which accounted for just over ten percent of national income in 1938, accounted for just over nine percent in 1948-50. Commerce, however, accounts for nearly half of the tertiary sector, and its growth is inevitably closely attuned to that of national expenditure. All things considered, the articulation of national income with its components makes a good case for the defensibility of the post-war real income index of 173. Articulation of the agricultural index with its components gives evidence that the post-war index of 148 is low. The growth of manufacturing appears to justify adequately the index of 198 as a measure of the growth which has taken place in that sector.[13]

No attempt has been made to reduce Argentina and Mexico to comparable terms except in so far as gross quantity figures and their relatives are in the same general plane of meaning. Change has been of similar proportions in the two economies, and in spite of the fact that the one has been traditionally mineral-exporting and the other a heavy exporter of agricultural products, each has shifted strongly away from its traditional base toward industrialization for domestic consumption. Both derive somewhat more than fifty percent of their

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[13] The belief that the agricultural index is low and that other indices of Mexican economic growth tend to minimize rather than to maximize growth during the period is corroborated by two quotations extracted from *The Economic Development of Mexico*, Report of the Combined Mexican Working Party. Published in 1953 for the International Bank for Reconstruction and Development by the Johns Hopkins University Press, Baltimore, Maryland. "Between 1939 and 1950, total agricultural production increased by 88%," p. 127. "In 1950 . . . real agricultural product was 114% above 1939 . . ." p. 129.

national income from sources generally classified as tertiary, that is, from the distributive and service agencies. It has been noted that the federal government was a proportionally declining source of income in Mexico, but in Argentina it is an expanding sector, half again as great proportionally as in Mexico. In the South American republic, the federal budget was roughly fifteen percent in 1938, and for 1948-49-50 it was also fifteen percent. The foremost Mexican study finds that during the 1939-50 period nearly forty percent of public expenditures was invested and public investment in that period amounted to almost forty percent of total investment in Mexico.[14] This suggests that the differences in importance of the federal budget in the two countries are more apparent than real, that the federal economy is of great and increasing importance in the national income in both countries.

Gross national product figures have been used as the base for the income series in Argentina because they offer a longer series, no published figures on national income after 1948 having been available to the investigator. The arithmetic mean of the gross national products for 1947, 1948, and 1951, each deflated by its corresponding retail price index, was calculated as a percentage of the mean of the similarly deflated gross national products for 1935-38. The resultant index was 191, indicating an increase in real product of approximately 91 percent in the approximately twelve-year period for which such data were available. The industrial index of 1937, the only year of the base period for which it was available, divided into the mean industrial index for 1949-51, gives a post-war relative of 179 for industrial production. The agricultural post-war relative of 103.6 is the mean of the indices for 1948-1950, as published in the Statistical Yearbook of the United Nations for 1952. This relationship immediately suggests that gross national product reflects a larger inflationary bias than the agricultural and industrial indices or that a large proportion of the increase has taken place in the teritary sector.

The six post-war relatives of fuels, power, and lubricants, showing increases of from forty-six to one hundred twenty percent, contain uncertainties. Energy consumption reduced to coal equivalents is imperfect in that it appears to contradict

[14] *Ibid.*, p. 110.

all the other figures, and it is to be doubted that it takes into proper account the difference between natural gas produced at Comodoro Rivadavia and natural gas piped to the Buenos Aires industrial district. One source has this to say: "In spite of a fifty percent increase in petroleum consumption and a forty-five percent increase in electricity generated between 1946 and 1951, consumption of electric power had to be severely restricted. Construction of the gas pipe-line from Comodoro Rivadavia has provided 500,000 cubic meters of natural gas for daily use.[15] The electricity relative of 209 is also unsatisfactory in that it carries an unknown element of household and public lighting. The production of refined petroleum products, the mean of whose relatives shows a rise of approximately 100 percent, is also faulty in that it does not take into account the consumption of imported products in the two periods.

The three industrial consumption relatives show very wide variation, from 146 percent for steel to 299 for cotton. The industrial production relatives are more significant and more consistent. Of eighteen post-war industrial production relatives, five show increases of under fifty percent. They are industries in which Argentina had developed relative self-sufficiency before 1937: meat packing, footwear, wine, butter, flour. Five range between fifty and one hundred percent growth, and the remaining eight range from one hundred to four hundred percent. The most startling growth rates characterize textile yarns, beer, and cheese.

Of the eight food processing industries selected for consideration, no one is insignificant. Among reporting nations of the U. N. organization, Argentina ranks from fourth to fourteenth in quantity figures, ranking seventh in flour, milk, and cheese, sixth in wine, ninth in butter and beer, fourth in meat, fourteenth in sugar. So far as food processing is concerned, Argentina has become one of the major nations of the world. The rise in production in each specific field is in general in inverse proportion to Argentina's relative position in the field in the pre-war period. She sustained fourth position in meat slaughtered, registering a ten percent increase. Beer

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[15] *Comments on Argentine Trade*, published monthly by the Chamber of Commerce of the United States in the Argentine Republic, Vol. 32, No. 12 (March, 1953), 55.

showed a two hundred percent increase; cheese and milk deliveries to dairies on the order of one hundred percent each. Butter, sugar, and flour showed post-war increases of thirty to fifty percent. Wine, which was a well established industry by 1937, shows only an eighteen percent increase, reflecting heavy competition from beer. The phenomenal post-war increase of 186 percent in beer production may be generalized to the western hemisphere and the British dominions, and in lesser degree to the European countries which did not have highly developed brewing industries before the war.

Other Argentine industrial indices also reflect growth, cotton yarn and wool yarn showing gains of more than two hundred percent, and rayon filament yarn more than four hundred percent. Footwear shows a forty-five percent gain and places Argentina in eleventh position among reporting nations. Cement, with a seventy percent gain, places Argentina fourteenth among the same group of countries.

The change in the level of industrial employment is an aspect of the economy which is relevant if somewhat less tangible than the quantity relatives profiled. The only available breakdowns for industrial employment are for 1944, 1946, and 1949.[16] They do not implement direct analysis of the growth of industrial production but they offer bases for estimates of rates of growth in industrial sectors not covered in the profiles by comparison with those covered. The number of workers employed in all industry grew by about three percent per year during the five years ended in 1949. The number of workers in textiles increased by thirty-one percent during the period, indicating that the rate of growth in textiles may have been twice that of industry as a whole. Examination of the whole period indicates that the textile growth was fairly well distributed through the whole twelve-year period, tending to accentuate slightly during the latter half. Production in the textile field appears to have increased by at least two hundred percent during a period when its number of employees apparently increased by sixty to seventy percent. This rate would not hold true throughout industry, though in such fields as metallurgy and chemicals, which showed somewhat larger percentage gains in employment, it may well have been much greater.

[16] *Síntesis Estadística Mensual*, Año IV, No. 11, November, 1950, p. 47.

It was not feasible to construct post-war relatives on large industrial groups whose total volume of employment in 1949 was equal to more than a third of the total of Argentine industry. Metals, vehicles, and machinery, employing some two hundred thousand workers by 1949, increased employment at approximately the same rate as textiles, suggesting that the production profile in this field would have resembled that of textiles. Chemicals, rubber, stone, glass, and ceramics with a total employment of one hundred ten thousand, increased employment at the rate of ten percent a year during the post-war period, suggesting production growth rates nearly twice as large as those in textiles. These two groups, together with textiles, accounted for approximately half of Argentine industry and suggest growth percentages of two hundred percent and above for individual census industries. Some industries such as woodworking and publishing declined slightly in the post-war period. Nearly half of industry showed moderate gains considerably below the employment gains in the dynamic half of the national industry. These data, coupled with the gains in the industries profiled and with the doubling of electricity production, suggest that the seventy-nine percent increase in industrial output indicated for the period by the industrial index is quite conservative.

Fourteen products have been selected for the agricultural profile. In general, they have been selected because either industrial processing or a large proportion of export offers a check on production estimates. Potatoes and oats, and to a degree rye, are exceptions, but are included because of their significance in total production and because they are produced in close proximity to corn, wheat, and linseed.

Of the fourteen, only three show diminished post-war production. Corn, wheat, and linseed were a very large part of pre-war agriculture, however, and all continue to be important, tonnagewise. Moreover, the losses in the corn and linseed relatives are so great as to bring into jeopardy the entire agricultural equilibrium. The loss in corn production was some six million tons a year.[17] The proportional loss in linseed was equally severe, though the pre-war tonnage was much less. The wheat post-war relative stood at 80 percent of the pre-war base, representing a loss of more than a million tons.

[17] *Síntesis Estadística Mensual*, February, 1952, p. 180. *Ibid.*, February 1952, Año VI, No. 2, p. 180.

Of the remaining eleven crops, six show gains on the order of one hundred to two hundred percent. Four of these gain leaders are industrial crops and the remainder are barometers of the shift of the Argentine dietary to a larger proportion of carbohydrates.[18] Barley and sugar cane, bases for two of the significant food-processing industries, show more moderate percentage gains, though the two million ton gain in cane is the largest of the profile.

The crops not tabulated are, in the aggregate, quite important, but presentation of a significant proportion of them would render the profile unwieldy.

Two factors contributed to swell the corn and wheat production of the base period. The first was the depression shrinkage in the European market for beef, implemented by the threat of the Ottawa Conference of 1932 and its Inter-Empire Trade Agreements. This situation slowed the national beef herd growth to a comparative standstill. The second factor was the series of heavy subsidies on wheat, linseed, and corn paid by government during the base period 1934-38. Some idea of the magnitude of the grain-price-guaranteeing program can be had from some of the residues in 1941. Government then owed the Banco de la Nacion three-quarters of a billion pesos for financing the program and estimated its holdings to include a hundred million bushels of wheat and fifty million bushels of linseed.[19] It is not surprising that subsidies beginning in 1933-34 and involving no significant acreage controls until 1938-39 should have served to encourage new and perhaps all-time records in the favored crops nor that these would distort the figures for this period otherwise so logical as a base for measuring a short-run phase of economic change.

The post-war relatives are misleading if taken at a glance, for they show many large gains balanced against one small and two large percentage gains. In balancing losses and gains, the three crops registering losses and seven products showing gains have been processed for the degree of balance. Tonnage losses or gains have been multiplied by published 1950 quotations. A trial balance has thus been struck between

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[18] United Nations, *Statistical Yearbook, 1052*, p. 264.

[19] Louis Nolan, "The Evolution of the Argentine Grain-Price-Guaranteeing Policy," *Foreign Agriculture*, May, 1942, pp. 185-204.

post-war losses and gains at 1950 prices.[20] Wheat, corn and linseed losses aggregated 1.66 billion pesos. Gains on barley, rye, cotton, potatoes, sunflower seed and wool aggregated 1.4 billions. This trial balance leaves unaccounted the gains in tobacco and rice as well as the gains in self-supplied dairy products and increase in the size of sheep and cattle herds. Prices on tobacco and rice are not available, and the balance on value of the change in self-supplied dairy products must here remain a mystery. Likewise the value of the increased sheep herd is an unknown. The value of the increased cattle herd can be calculated to some degree, however.

The Argentine agricultural profile does not reveal a large hidden growth in livestock wealth which was not perfectly apparent until the preliminary figures on the 1952 livestock census were released.[21] It might well have been surmised from the post-war milk and cheese relatives as well as from the reduced harvests of the three major export crops that production factors were being shifted from field crops to grazing and feeding, but the small rise in the volume of meat marketed, the increasing proportion of carbohydrates in the national diet, and similar factors tended to obscure the rise of sixty percent in the 1952 cattle herd over the pre-war base. The census showed eleven million calves under one year of age. In an article discounting the comparability of the 1952 census with that of 1937 because it was taken after the calving season, Mr. Horacio Giberti observes as follows:

> Even so, the homogeneity of the data furnished and their reciprocal uniformity and comparability with the results of other census operations . . . refutes any suggestion of the possibility of erroneous or false declarations . . . to an extent which might have materially altered the totals.[22]

The average live-weight price for "novillos en estancia" during 1950 was 1153 pesos per ton.[23]

Calculating the 1938 yearlings as the same proportion of the herd as in the 1952 census, we discover 8,140,000 calves.

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[20] *Síntesis Estadística Mensual*, February, 1951, Año 5, No. 2, p. 180. The second lowest of four wool prices was used. Retail prices were used for potatoes, other products being quoted at wholesale.

[21] *Comments on Argentine Trade*, May, 1953, p. 47.

[22] Ing. Agron. Horacio Giberti, "Cattle Stocks and Beef Supplies," *Comments on Argentine Trade*, July, 1953, pp. 13-14.

[23] *Síntesis Estadística Mensual*, April, 1953, p. 428.

Deducting ten percent for losses, we further find 7,326,000 yearlings as 1938's production. Using the same proportions on 1951's 11 million calves, the annual production of yearlings is 9.9 millions. The excess of 1951 over 1938 of 2,874,000 head, counting yearlings at 600 pounds live-weight and using the average quoted price of 1153 pesos per ton,[24] we arrive at a gain of just under a billion pesos on the annual production of live-weight yearlings in the post-war year over the pre-war. This tips the balance far to the positive side of the national income ledger and suggests that the post-war mean agricultural index of 103.6 is far too low, that it has not counted an enormous stock gain in cattle and sheep together with corresponding annual flow gains which go into stock.

It can hardly be argued that cattle have not been substituted for field crops since eighty-five percent of their numbers are still concentrated in the five best farming provinces—Buenos Aires, Santa Fe, Cordoba, Entre Rios, and Eva Peron. The proportion of cattle in these provinces is slightly less than in 1937, other northern states having shown greater gain in 1952. Sheep population is showing some tendency to shift into the area less adapted to intensive cultivation, but declines in absolute numbers have been fairly slight in the rich farming areas, thirty percent of the national herd still being found in Buenos Aires province.

This intermediate run movement from field crops to livestock culture is not new in Argentine history, and its causes are not far to seek. Average prices of corn and wheat from 1946 to 1951 had little more than doubled. The price of yearlings on the hoof had more than tripled.[25] The shift began about 1940 and continued unevenly, hastened by post-war grain and beef price policies, and has caused a good deal of exaggerated speculation with regard to Argentine agricultural decline.

The transportation relatives of Argentine post-war economic activity are extremely uneven. Ocean loadings shrank, tonnage-wise, to half their 1934-38 level. On the other hand, ocean unloadings, representing imported tonnage, increased by thirty percent. Railway freight traffic increased by thirty-eight percent, and railway passenger traffic increased two and

[24] *Ibid., July, 1953,* Año VII, No. 7, pp. 13-14.

[25] *Ibid.,* February, 1951, p. 180; March, 1953, Año VII, No. 3, p. 480.

one-half times. Passenger automobiles increased by only three percent, but the number of trucks increased by a hundred sixty-four percent. The Argentine registered merchant fleet increased 195 percent in tonnage, with a very great increase in the share of the ocean traffic clearing Argentine customs.

The best of the transportation barometers would appear to be domestic freight traffic. Railway freight traffic and numbers of auto trucks would appear to be such barometers but they are impossible to combine under the limitations which this investigation has accepted. The best this profile can do is to suggest that increased haulage lies between thirty-eight and one hundred sixty-four percent.

This paper rests primarily on the flow concept of economic change since in the short-run changes of flow are obviously both more important and more apparent than are changes in the level of stock. However, increases in the value of industrial capital whose flow results would not show up completely in 1948-1951 relatives, are important. According to a summary of the *Economic Survey of Latin America* for 1952, capital stock in Argentina, measured at 1950 prices, increased from 91.4 billion pesos to 140.9 billions, or approximately 54 percent between 1945 and 1952.[26] The report divides investment into three categories or income sectors usually defined as primary, secondary, and tertiary. The largest sector, the tertiary, has some 56 percent of total capital stock, the secondary has thirty-two percent, and farming, which stands alone as primary, has just over twelve percent of the country's capital stock. The largest rate of growth was in the secondary, or manufacturing, construction, public utilities sector, where stock increased by 67 percent during the seven-year period. The classification of fifty-six percent of capital stock in the tertiary sector, for which relatively few barometers are presented, renders the meaning of the profile somewhat less certain, though the fifty-one percent growth noted in the tertiary sector in the seven-year period gives an indirect insight into the growth of the tertiary sector during the longer period contemplated in this paper. This seven percent per year growth in the tertiary sector suggests that its income-producing power grew at an even greater rate,

[26] *Comments, loc. cit.*, XXXII, No. 12 (July, 1953), 21.

since most types of services tend to use more personnel in proportion to equipment than do other sectors. The sixty-seven percent increase in the capital stock of the secondary sector furnishes an indirect but positive corroboration of the high industrial post-war relatives for manufacturing noted previously.

Clearly industrial capitalization has proceeded at a somewhat more rapid rate from 1945 to 1951 than flows of industrial goods from 1937 to 1949-50 would seem to warrant. The industrial index for the whole period exceeds the industrial investment index for the shorter period only in the proportion of 79 to 67. There seem to be several partial explanations for this discrepancy, no two of which are mutually exclusive and no one of which may be disregarded: (1) The rate of industrial capitalization for the shorter period may tend to reflect a higher price level than that of industrial production for the longer period. (2) It is entirely likely that much of the new capital had not been fully felt in production flows by 1948-50. (3) The rate of capital growth has been much more rapid since 1945 than from 1937-44. (4) The marginal productivity of capital has declined as a consequence of its disproportionate increase over other factors. (5) Temporary technological imbalances and scarcities of parts and materials have tended to restrict the flow of industrial product from the new capital.

In summing up, it may be said for the Argentine indices of agricultural and industrial production that their bases appear to have been conservatively estimated. Defensibility of the real gross national product post-war relative of 191 must rest in considerable degree on growth in the tertiary category, most of whose quantity relatives are difficult to calculate. However, indirect barometers and single relatives seem to indicate a very high rate of growth in this sector. Without becoming involved in a study of ends and values, it is not possible, nor within the scope of this inquiry, to prove that the government services were worth what they cost. It is fairly simple to demonstrate, however, that about one-third of the tertiary sector is made up of payments by government, and from 1938 to 1948-50 that the volume of these, measured in 1948 prices, increased at a considerably more rapid rate than did real national product. Federal government expenditures increased from 1276.8 millions of pesos in 1938 to an average of 7662.6 millions for 1948-50. Each year deflated in terms

of its own price level reveals an average federal budget for the period 130 percent greater, in terms of 1948 pesos, than the 1938 budget converted to the same level. The auto truck relative of 264 and the federal budget growth of 130 percent tend to indicate a more rapid growth of income in the large tertiary sector than in the primary and secondary sectors. Though commerce and finance, the most remunerative per head of all economic activities, are difficult to judge, it is evident the rate of growth here must approximate that of national income and product. All in all, the data support a good case for the reasonable accuracy of the national product figures of Argentina as a measure of economic growth from 1934-38 to 1948-50.

But what can be done with a secure feeling that claims and counter-claims about the rate and the range of economic change have been reduced to a reliable common denominator? Can policy then be automatically determined? Can investment factors be allocated among competing sectors of a developing economy without need for specific economic analysis? The answer to the second and third questions is definitely "no." As to the first, there is need for caution in the application of national income figures and price data to policy in the underdeveloped countries. The tendency is to accept these tentative and approximate calculations too literally and too eagerly, and in too short runs. They are usually more reliable after having been re-calculated, two or more years away from the time when they enter into immediate policy debates. A cautious British statement evaluates the role of national income figures in the making of economic policy as follows:

> There would be general agreement among economists in this country that the habit of looking at economic questions in their general context in quantitative terms has spread in government circles in the last ten years.[27]

This paper has proceeded in a pragmatic manner, working toward definitions rather than postulating them. Throughout, both from the methodological and the substantive approaches, its main concern has been to stay consistently within a scope postulated by R. W. Goldsmith:

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[27] E. F. Jackson, "The Recent Use of Social Accounting in the United Kingdom," International Association for Research in Income and Wealth—*Income and Wealth Series I*, p. 152.

> We shall have to be content with a provisional and rather vague definition of economic growth or decay, describing it as a sustained increase (or decrease) in the level of economic activity measured in real rather than in monetary units.[28]

The conventional conception of national income as falling into primary, secondary, and tertiary sectors has been useful in some degree, in spite of the fact that it is not uniformly applied in the literature. It has in general been used as follows: Primary—agriculture; Secondary, manufacturing, construction, and public utilities; Tertiary, transport, commerce, government, and other services. A tentative conclusion may be recorded, that the initial stage of a strong and conscious development program tends to throw fifty percent or more of economic activity into the tertiary or service sector, where a nation tends to erect the institutional struts on which it builds. A second stage sees the secondary sector outrun the tertiary sector, with primary production receding into a relatively minor investment position, even in Argentina. Mexico and Argentina, at least, seem to have paralleled Japanese development.

And what can be done with a profile of partial components of national income if it is discovered that they do not corroborate the official estimate of real income or product in their story of economic change? It is by no means certain that the series would be wholly useless even if it were thus negatived. Indeed the profile would be all the more useful if there were no reliable income, product, and price series. The profile, integrated through longer-run periods into a series of linked relatives, is the skeleton of the technological aspect of economic history.

Conclusions

Methodologically, it seems justifiable to conclude that estimates of national income and product in Argentina and Mexico for the period under scrutiny were conservatively taken, that their articulation with components is reasonably consistent, and that estimates of growth in their terms are defensible.

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[28] R. W. Goldsmith, Income and Wealth Series II, *Income and Wealth of the United States*, "The Growth of Reproducible Wealth in the United States," p. 249.

APPENDIX A

PRE-WAR—POST-WAR ECONOMIC INDICES AND PRODUCTION PROFILE IN MEXICO

(Based on the *Statistical Yearbook 1952* of the United Nations unless otherwise noted)

	1934-38	*1949-51*	*Relati*
A. General Indices			
National Income (millions of pesos)	4289 (1)	32566 (2)	
Retail Price Index (1948 = 100)	24.6	105.6	
Real National Income	17207 (3)	30776 (3)	173
Index of Manufacturing	61.4	121.6	198
Agricultural Index	100	148	148
B. Product Profiles			
I. Fuel and Power			
Energy Consumption, Coal Equivalents (thousand M.T.)	8185	15923	195
Electricity Produced (million Kwh.)	2275	4549	200
Crude Petroleum (thousand M.T.)	5874	9995	170
Natural Gas (million C.M.)	749	1806	246
Petroleum Refining Index (1948 = 100)	61	115	188
II. Industrial			
A. Consumption			
Steel (thousand M.T.)	326	744	228
Cotton	53.1 (6)	63.4	119
B. Food Processing (factory only)			
Flour (thousand M.T.)	207	327	158
Sugar (thousand M.T.)	297	655	221
Beer (thousand hectoliters)	999	5003	500
C. Other Industrial			
Footwear (thousand pairs)	7348	3732	51
Pig Iron and Ferro-alloy (th. M.T.)	81	215	265
Steel (thousand M.T.)	146 (7)	373	255
Cement (thousand M.T.)	305	1454	476
Cotton Fabrics (thousand M.T.)	38.48	40.89 (8)	106
III. Agricultural Products			
Coffee (thousand M.T.)	56	66	118
Tobacco	15.4	34.8	227
Corn	1665	3131	188
Rice	76	159	210
Potatoes	67	132	197
Cotton (ginned)	69	255	370
Cottonseed	127	422	332
Wheat	374	474	127
IV. Metal Mining			
Iron Ore (thousand M.T.)	79.6	282	354
Copper	39.6	62.6	158
Zinc	127.6	197.3	154
Lead	213.3	228.1	107
Gold (kilograms)	24061	15845	66
Silver (M.T.)	2450.1	1443	59
V. Transportation			
Ry. Passenger Kilometers (millions)	1524	3052.6	201
Ry. Freight Ton Kms.	4919	9205	187
Auto Trucks	42.3	116.3	275
Merchant Fleet (thousand G.R.T.)	36.1	143.5	397
Ocean Loadings (thousand M.T.)	4059	3995	98
Ocean Unloadings (thousand M.T.)	566	950	168

VI. Livestock	*1939*	*1949-51*	*Relative*
Cattle (thousand head)	17588	14500	82
Pigs	5106	5663	108
Sheep	4452	5100	115
VII. Federal Government Expenditures	*1938*	*1948-50*	*Relative*
(millions of pesos)	537	2750	
In 1948 pesos	1732	2668.5	
As % of Real National Income	10	9.2	

(Note numbers in parentheses to the right of the figures to which they refer.)
(1) *U. N. Statistical Yearbook, 1951*, Table 156, p. 431.
(2) International Financial Statistics, Monthly Publication of the International Monetary Fund, Vol. VI, No. 10 (October, 1953), p. 114. 1948-50.
(3) Mean of deflated estimates.
(4) 1950.
(5) 1937.
(6) 1938-1939.
(7) 1940.
(8) 1937.

On the substantive side, it seems reasonable to conclude tentatively that economic growth in Argentina and Mexico was occurring at a very rapid rate from 1934-38 to 1948-50. Growth rates in industry and in services have far outrun primary production gains in the two countries. Growth in the specific industries has been uneven, but general. As economic activity becomes increasingly domestically oriented, both countries have tended to show most rapid rates of growth in sectors in which they were deficient for domestic supply, and to show less rapid rates in those in which earlier development was more adequate to the domestic market. The increased food production in Mexico has been paralleled by similar increases in the production of textiles and in the industrial processing of dairy products in Argentina. Impressive growth rates in the consumption of electricity, in the production and refining of petroleum substantiate other evidences of industrial growth in both countries. The fabulous Mexican basic industry gains and the equally significant Argentine gains in employment and capitalization in metallurgical, chemical and other technical industries too new to measure in a twelve-year relative are indicative of reorientation of economic activity in the two countries toward production for domestic consumption.

Two questions occur: (1) Is economic growth taking place at such a rate throughout the under-developed three-quarters of the world? (2) Can such a rate continue to obtain in any single country over a long period? This paper has built no

APPENDIX B

PRE-WAR—POST-WAR ECONOMIC INDICES AND PRODUCTION PROFILES IN THE ARGENTINE REPUBLIC

(Based on figures published in the *Statistical Yearbook* of the United Nations unless otherwise noted)

	1934-38	*1949-51*	*Relati*
A. General Indices			
Gross National Product (millions of pesos)	8315.8 (1)	45633 (2)	
Retail Price Index (1948 = 100)	46.2 (3)	134.3 (3)	
Real Gross National Product	17451.4 (4)	33297.9 (4) (1948-50)	191
Agricultural Index	100	103.6 (5)	103.8
Industrial Index	56 (6)	100	179
B. Product Profiles			
I. Fuel and Power (thousands of metric tons unless otherwise noted)			
Energy Consumption, Coal Equivalents	9213	13458	146
Electricity (million Kwh.)	2109.7 (1)	4423	209
Crude Petroleum Produced	2155.2	3400	157
Gasoline	768.2	1390.6	181
Heavy Oils	1375	3032	220
Lubricating Oils	45.5	94.4	208
II. Industrial			
A. Consumption (thousand metric tons)			
Cotton	32.57	94.2 (8)	290
Wool	16.3	32.5	199
Steel	846	1235.6	146
B. Food Processing (thousand metric tons)			
Meat	1129	1244 (9)	110
Milk del'd to dairies (th. quintals)	12446	24027 (10)	180
Cheese	33.6	94.9 (9)	282
Butter	29.9	42.4	142
Flour	1460	1937	132
Sugar	402	604.1	150
Beer (thousand hectoliters)	1351.8	3880.3	286
Wine (thousand hectoliters)	6788	8033	118
C. Other Industrial (thousand metric tons)			
Cotton Yarn	21.66 (1)	79.29	366
Wool Yarn	12.30	40	325
Rayon Filament Yarn	1.08	6.96	510
Footwear (thousands of pairs)	9995 (6)	15779 (9)	158
Cement	891	1529	170
III. Field Crops		*1950-51—1952-53* (17)	
Sugar Cane	59933.9 (11)	8166.1 (8)	137
Sunflower Seed	302.6 (12)	888.6 (13)	294
Ginned Cotton	60	130 (8)	216
Cottonseed	146	252 (8)	172
Wool	169	192 (14)	116
Potatoes	663	1328 (15)	207
Tobacco	15.4	23.5 (16)	152
Barley	503	764.5	152
Linseed	1702	481	28
Corn	7892	1848.8	27
Wheat	6508.9	5232	80
Oats	748	759	101
Rye	254	684.8	269
Rice	51 (2)	154 (8)	320

IV. Transportation	*1934-38*	*1949-51*	*Relative*
Railway Kilometers (millions)	12116	16765	138
Railway Passenger Kilometers	3924	13361	347
Passenger Autos (thousand)	292	319	103
Ocean Loadings	12691	6314	49
Ocean Unloadings	8756	11400	130
Trucks (thousand)	87.5	231.3	264
Merchant Fleet (thousands of gross registered tons)	302	902	295
V. Livestock Census	*1937*	*1952*	*Relative*
Cattle (million head)	33.3	45.3	160
Sheep	43.9	54.7	122
Hogs	4.0	4.0	100
	1938	*1947-48, 1951*	
VI. Federal Government Expenditures	1276.8	6124.5	
In 1948 pesos	2605.7	5006.5	
As a % of Real GNP	14.9	15	

(Note numbers in parentheses to the right of the figures to which they refer.)
(1) 1935-1938.
(2) 1947, 1948, 1951.
(3) Mean 1935-1938: (1948 = 100).
(4) G.N.P. ÷ RPI.
(5) Mean 1948-50.
(6) 1937.
(7) 1937-38.
(8) 1949-50, 1950-51, 1951-52.
(9) 1948-50.
(10) 1946.
(11) 1938-39, 1939-40.
(12) 1937-38—1938-39.
(13) 1947-48—1951-52.
(14) 1948-49—1950-51.
(15) 1948-1950.
(16) 1947-49.
(17) Figures for sugar cane, sunflower seed, barley, linseed, corn, wheat, oats, rye and rice from *Sintesis Estadistica Mensual*, March, 1953, 240-263.

basis for an answer to either question. However, in answer to number one, it may be pointed out that industrial production in the world as a whole appears from available estimates to have increased about sixty-five percent during the same period.[29] Russia, the United States, and Canada showed rates of industrial growth in excess of ninety per cent during the period in which Mexico and Argentina sustained eighty and ninety. Some smaller under-developed countries like Bulgaria and Puerto Rico, impelled by positive economic policy but enjoying the favor of major industrial neighbors, appear to

[29] Computed from data in Table 37, "Index Numbers of Production," *Statistical Yearbook*, Third Issue, Statistical Office of the United Nations, Department of Economic Affairs, p. 120.

have sustained even greater growth rates. It has also been pointed out that real national income in Japan increased ten times over during the seventy years ended in 1940.[30]

At all events the world has moved into an era wherein a major focus of attention is the amount, composition, and distribution of the total social dividend. "The habit of looking at economic questions in their general context in quantitative terms" imposes a major responsibility on the social income accountant.

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[30] Shigeto Tsuru and Kazushi Ohkawa, *op. cit.*

The Most Profitable British Mining Investments in the Hispanic World

By J. Fred Rippy

I

To say that Hispanic America has been an important source of metals for the British Isles is to assert nothing startling or new. For three hundred years Englishmen obtained by means of traffic or buccaneering a good part of their precious metals from the American colonies of Spain and Portugal, and for another century they obtained them through trade or direct investment from the independent nations of Hispanic America. During the latter period this part of the New World served also as a source of other metals, especially copper, tin, and platinum, while Spain and Portugal, particularly after 1850, supplied the United Kingdom with considerable quantities of copper and iron ore and some lead, wolfram, and tin, obtained largely by means of British investment in the Hispanic mining districts.

There were three periods of brisk British investment in Hispanic American mines, the first two of them followed by a slump: the 1820's, the 1880's, and the decade beginning with 1901. The par value of British capital in the mines of Hispanic America was approximately £3.5 million in 1825 and less than £3.4 million in 1880. This capital expanded to nearly £23.3 million by the end of 1890, contracted to less than £12.3 million by the close of 1900, climbed to over £25.6 million by the last days of 1911, and then began to shrink again, slowly until 1930 and more rapidly thereafter. The par value of the British investment in Hispanic American mines was probably not more than £6 million in 1952, a good part of it in companies organized in Canada or the United States.[1]

The flow of British capital into the mining regions of Spain was much steadier. Beginning in the 1850's, it rose to a peak around 1911, when the par value of the investment was some £9 million. It had reached £8 million by the end of 1890 and it stood at approximately £5 million at the close of 1952.

[1] See my articles in *Inter-American Economic Affairs*, Spring and Summer of 1948 and Summer of 1952.

TABLE 1

THE MOST PROFITABLE BRITISH MINING INVESTMENTS IN SPAIN AND PORTUGAL

Company	*No. of Years*	*Initial Year*	*Average Annual Return*
SPAIN			
Alamillos (lead)	20	1880	6.7%
Bilbao (iron mine and railway)	53	1882	12.6
Consett Spanish Ore (iron)	71	1880	30.7
Fortuna (lead)	20	1878	11.5
Linares Lead Mining	30	1878	20.2
New Centenillo Silver-Lead Mines	17	1903	65.4
Orconera Iron Ore	71	1880	35.0[1]
Río Tinto (copper, sulphur)	73	1879	29.7
Somorrostro Iron Ore	29	1924	145.8
Tharsis Sulphur and Copper	80	1872	13.4
Vizcaya Santander Mining (iron)	58	1881	15.6
PORTUGAL			
Angola Diamond	30	1921	10.7
Beralt Tin and Wolfram	15	1938	32.3
Mason and Barry (copper, iron)	74	1878	16.2

PAR VALUE OF ORDINARY SHARES AT BEGINNING AND END OF DIVIDEND PERIOD

Company	*Beginning*	*End*
Alamillos	£ 70,000	£ 70,000
Bilbao	500,000	50,000
Consett Spanish Ore	55,200	36,800
Fortuna	50,000	50,000
Linares Lead Mining	58,714	45,000
New Centenillo Silver-Lead Mines	75,000	75,000
Orconera Iron Ore	200,000	2,000,000
Río Tinto	2,484,780	2,125,000
Somorrostro Iron Ore	750	750
Tharsis Sulphur and Copper	1,136,660	1,250,000
Vizcaya Santander Mining	79,122	20,000
Angola Diamond	800,000	1,630,000
Beralt Tin and Wolfram	331,000	331,000
Mason and Barry	1,851,640	185,172

[1] This figure is based upon incomplete data, but I am sure it is not too high. Consett Spanish Ore's dividends came from the ownership of a fifth of Orconera's shares.

The British investment in Portuguese mines seems never to have been very large. The first important venture was made in 1878 by Mason and Barry, who acquired the San Domingo Mine, a copper, sulphur, and iron mine, at that time. The paid-up capital of this company was less than a nominal £2 million at the outset, and this was gradually reduced, mainly by repayment, to less than a tenth of that sum by 1901. The par value of the British investment in the mines of Portugal never rose much above £2 million, and it was probably less than that in 1952, even including shares held by Englishmen in the Angola Diamond Company.[2]

British capital ventured in the mines of Spain and Portugal paid higher returns, by and large, than the British mining investment in Hispanic America. An investment in some 56 enterprises in these two European countries resulted in at least 14 profitable mining units, as set forth in Table 1. Of the approximately 400 mining companies in which Englishmen invested their capital in Latin America at one time or another following 1820, hardly more than 20 turned out to be profitable.[3] These are exhibited in Table 2.

This abbreviated story, which will be arbitrarily closed in 1952, has a happy ending. Six of the 8 mining companies in which Englishmen had their capital invested in Spanish and Portuguese domain were now profitable, 3 of the 6 very profitable. Of the 2 unprofitable enterprises, Esperanza Copper and Sulphur and Peña Copper Mines, only Esperanza failed to make any returns during 1947-51; Peña's per-annum average was 2 per cent during this period. Twelve of the 16

[2] The statistics presented in this essay are based upon two sources, both published in London: *Stock Exchange Official Intelligence*, 1882-1933, and *Stock Exchange Year-Book*, 1876-1953. Both are investment manuals published annually, both list and describe mining companies under separate headings, and both have exhaustive indexes. The two were consolidated in 1934 under the title of *Stock Exchange Official Year-Book*. My tabulations deal only with ordinary shares, and rates of return have been figured on par values. Based on market values, the rates would be decidedly lower in the case of the more prosperous enterprises.

[3] Some of these—Anglo-French Ticapampa; Cie. Aramayo; Mexico Mines of El Oro; Pato Consolidated; and Placer Development, with some property outside of Latin America—were minority investments. But Englishmen also had minority investments in a few profitable companies not listed in Table 2, such as: El Callao (Ven.); Cía. Huanchaca de Bolivia; Fresnillo (Mex.); and South American Gold and Platinum (Col.).

TABLE 2

THE MOST PROFITABLE BRITISH MINING INVESTMENTS IN HISPANIC AMERICA

Company	*No. of Years*	*Initial Year*	*Average Annual Return*
Anglo-French Ticapampa Silver (Peru)	15	1905	14.3%
Butters Salvador Mines (El Salvador)	14	1903	55.1
Cie. Aramayo de Mines en Bolivie	40	1910	15.5
Colombian Hydraulic Mining	13	1887	10.7
Copiapó Mining (Chile)	16	1886	11.0
Darién Gold Mining (Colombia)	12	1892	23.3
Esperanza (Mexico)	10	1904	50.7
Frontino Gold Mines (Colombia)	74	1888	7.3
Lampa Mining (Peru)	15	1938	9.1
Mexico Mines of El Oro	19	1909	69.1
Nechí Mines (Colombia)	10	1916	53.0
Oroville Dredging (Colombia)	38	1915	19.1
Pato Consolidated Gold Dredging (Col.)	14	1939	29.1
Pato Mines (Colombia)	14	1919	90.0
Placer Development (Colombia)	18	1935	84.6
St. John del Rey (Brazil)	76	1875	9.2
San Francisco Mines of Mexico	29	1923	21.8
Santa Bárbara Gold Mining (Brazil)	12	1875	12.7
South American Copper (Venezuela)	9	1909	143.0
Tolima Mining (Colombia)	15	1881	19.4

PAR VALUE OF ORDINARY SHARES AT BEGINNING AND END OF DIVIDEND PERIOD

Company	*Beginning*	*End*
Anglo-French Ticapampa	90,000	117,500
Butters Salvador	150,000	150,000
Cie. Aramayo	494,090	1,000,000
Colombian Hydraulic	73,308	75,000
Copiapó Mining	174,212	225,000
Darién Gold Mining	10,000	25,000
Esperanza	455,000	455,000
Frontino Gold Mines	140,460	190,573
Lampa Mining	70,000	70,000
Mexico Mines of El Oro	180,000	210,000
Nechí Mines	70,000	70,000
Oroville Dredging	686,538	250,000
Pato Consolidated	650,000	650,000
Pato Mines	100,000	100,000
Placer Development	180,000	180,000
St. John del Rey	253,000	546,265
San Francisco Mines of Mexico	751,979	2,056,813
Santa Bárbara Gold Mining	20,000	30,000
South American Copper Syndicate	9,638	22,500
Tolima Mining: "A" shares	70,000	70,000

mining organizations in which Britishers still had investments in Hispanic America were profitable, 6 of the 12 decidedly so, although no dividends whatever had been distributed in recent years by the 4 unprofitable enterprises—Fabulosa Mines (Bo-

TABLE 3

BRITISH MINING INVESTMENTS IN THE HISPANIC WORLD, END OF 1952

Company	*Nominal Capital 1952*	*Nominal Yield 1947-51*
SPAIN		
Río Tinto (also some property in Africa)	£ 3,750,000	15.1%[1]
Somorrostro Iron Ore	750[2]	183.5
Tharsis Sulphur and Copper	1,250,000	9.0
PORTUGAL		
Angola Diamond (Portuguese Africa)	1,630,000	42.0[3]
Beralt Tin and Wolfram	331,000	44.0
Mason and Barry	185,172	12.0
HISPANIC AMERICA		
Anglo-French Ticapampa (Peru)	150,000	5.3
Cie. Aramayo de Mines en Bolivie	1,000,000	10.0
Fresnillo (Zacatecas, Mexico)	210,000	126.5
Frontino Gold Mines (Colombia)	243,963	7.5[4]
Lampa Mining (Peru)	70,000	7.0
Mazapil Copper (Mexico)	600,000	9.5
Oroville Dredging (Colombia)	250,000	27.5
Pato Consol. Gold Dredging (Colombia)	650,000	27.0
Placer Development (mostly in Colombia)	180,000	60.0
St. John del Rey (Brazil)	721,413	6.5[6]
San Francisco Mines of Mexico	2,056,813[5]	50.0
South American Gold and Platinum (Col.)	410,000	27.0

[1] This is the nominal rate for the ordinary shares, £2,125,000. Unless otherwise indicated, all the figures for capital refer to ordinary shares.

[2] The capitalization of this company was once much larger; capital had been repaid from earnings.

[3] This is a Portuguese company; Englishmen probably have only a minority investment.

[4] The par value of Frontino's ordinary shares in 1952 was £190,573; its preference shares, with a par value of £53,390, paid 10 per cent annually.

[5] This company distributed a 100 per cent share bonus in 1951 and paid a dividend of 60 per cent on the increased capital for that year!

[6] The par value of St. John del Rey's ordinary shares was £621,413; its preference, with a par of £100,000, paid 10 per cent.

livia), El Oro Mining and Exploration (Mexico), Palmarejo and Mexican Gold Fields, and Peruvian Associated Gold Mines—with an aggregate capitalization of over £900,000, figured at par. Table 3 exhibits the capital and recent dividend records of these 18 prosperous mining organizations. It is likely that half of those operating in Latin America were no longer controlled by English investors, some being dominated by Canadians and others by citizens of the United States; but residents of the United Kingdom held at least a minority investment in these.[4]

II

Data published recently[5] have demonstrated that returns from British investments in the Empire and the Commonwealth were higher than returns from most other British overseas capital. This has been emphatically true of British capital ventured in mining. Profits derived from British

[4] English capital may never have dominated some of them. Two, the Fresnillo Company and South American Gold and Platinum, are U. S. corporations; two others, Pato Consolidated and Placer Development, are Canadian. Anglo-French Ticapampa has offices in New York as well as London, besides having some French capital at one time or another. Compagnie Aramayo de Bolivie has long been domiciled in Switzerland. For the sake of uniformity the capitalization of these enterprises has been converted into sterling at the approximate rate at the time of issue. Dividend statistics in Table 3 are for ordinary shares only and do not include share bonuses.

[5] See my articles in *Journal of Business*, April 1953, and in *Inter-American Economic Affairs*, Spring and Winter of 1953. In all these investigations I have used par values in calculating rates of return for greater convenience in making comparisons and contrasts. I am fully aware that many rates would be lower if market values were employed; but I do not accept the view that rates derived by figuring on that basis are an exact measure of real returns. Who knows what each shareholder paid for his corporate securities or exactly when every shareholder acquired them? Who knows the precise value of vendors' shares? Are earnings withheld from shareholders and "ploughed back" into corporate capitalization real investment? Is not the sale of securities at a premium often the result either of windfalls or the restraint of management in the distribution of earnings? Much of the literature on corporations is permeated with fiction. In fact, in American law, the corporation itself is endowed with a fictitious personality. High rates of return on par values cause market values to soar, but Great Britain's "Kaffir" millionaires did not accumulate their fortunes from returns of 4 to 10.5 per cent on their actual investment.

mining investments in the Hispanic world have been much smaller, on the whole, than profits derived from the capital invested by residents of the United Kingdom in the mines of Australia, New Zealand, British Malaya, and British Africa. Illustrations might be presented from all of these countries, but profusion of detail will be avoided by drawing them from British Africa alone and for the period since 1933. Two exhibits are offered, one dealing with gold and diamond mines for the years 1934-52 and one with other types of mines for the years 1939-52. As in the tabulations for the Hispanic countries, the rates of return are based upon the par value of ordinary shares and exclude share bonuses.

Beginning in the 1870's, British capital moved swiftly into the African mining areas. Almost 1,200 mining companies were founded in the United Kingdom for operation in British Africa during the next 80 years. The majority of them were ephemeral and of little importance, but approximately a third of the total were active for at least a decade and well over a hundred of this third paid nominal annual average dividends of 10 per cent and more on their ordinary shares for time-spans running from 15 to over 60 years. The par value of the British investment in these mines, including all types of securities, was approximately £130 million by the end of 1911, and it rose to the neighborhood of £319 million by 1952.[6] Profits from African mines created a group of British millionaires, Cecil Rhodes, Barney Barnato, and Julius Wernher among them, before the outbreak of the Boer War in 1899. The biggest hauls were made later, however, and especially after 1933, when Franklin D. Roosevelt raised the price of gold from $20.67 to $35 an ounce and pegged it there and when war economies pushed up the price of other metals and even caused a boom in the African coal mines.

Table 4 lists 43 companies mining African gold and diamonds (the total was around 180) that rewarded their owners with average annual dividends of over 20 per cent on the par value of their investment in ordinary shares during the period covered. In fact, 32 of the 43 yielded annual averages of

[6] *Stock Exchange Official Year-Book*, 1953, p. 1581. The figure for early 1952, based upon the total of African mining securities quoted on the London Stock Exchange, is probably considerably too high, since by no means all of these securities were owned by residents of the British Isles.

between 30 and 259.2 per cent; and, although only a single company reached the latter astounding height, 3 others managed to return yearly averages of well over 100 per cent. Moreover, yields for the last five or six years of the period indicated that the boom had not terminated. So much for Table 4, the first of the African group.[7] Table 5 may speak for itself.

TABLE 4

THE MOST PROFITABLE BRITISH MINING INVESTMENTS IN AFRICA, 1934-52: GOLD AND DIAMONDS

Company	*Average Annual Return*		*Yield in*
	1934-51	*1947-51*	*1952*[1]
Anglo American Corporation	36.4%	56.0%	60.0%
Anglo-Transvaal Consol. Investment	57.2	48.0	50.0
Ashanti Goldfields Corporation	70.0	44.5	
Brakpan Mines	40.3	26.0	27.5
Cam and Motor Gold Mining	31.4	22.4	36.0
Consolidated African Selection Trust	45.7	74.0	80.0
Consol. Diamond Mines of S. W. Africa	29.4	65.0	150.0
Consol. Main Reef Mines	24.6	25.0	31.2
Consol. Murchinson Goldfields and Dev.	63.5	219.5	140.0
Crown Mines	130.6	79.0	70.0
Daggafontein Mines	60.9	90.5	120.0

[7] Most of the big dividend-coiners listed in this table had their best years during the period under review, but some had paid higher dividends in earlier times. Globe and Phoenix, for example, yielded an annual average of 57.7 per cent on its ordinary shares during the 33 years preceding 1934 and Modderfontein B Gold Mines returned a per-annum average of 75.3 per cent for the 22 years preceding that date. A number of other companies that had made large profits had exhausted their richest deposits by 1934 and had either dissolved or ceased to return the large dividends of earlier years. Such were the following, which returned annual averages of from 30.1 to 520 per cent for time-spans of more than 20 years: (1) New Modderfontein Gold Mining; (2) Modderfontein Deep Levels; (3) Ferreira Gold Mining; (4) Premier (Transvaal) Diamond Mining; (5) Van Ryn Deep; and (6) Witwatersrand Gold Mining. But the reader should bear in mind that I am dealing here only with the most profitable securities of the most profitable companies. S. Herbert Frankel, in his *Capital Investments in Africa* (London, 1938), pp. 91-92, says that the average annual return from the Rand Mines for the years 1887-1932 was somewhere between 4.1 and 10.5, depending upon the basis of calculation. The average for subsequent years was considerably higher, both there and in other parts of Africa.

De Beers Consolidated Mines[2]	44.4	98.0	220.0
Durban Roodepoort Deep	32.0	36.5	50.0
East Champ d'Or Gold Mining	41.5[3]	26.5	25.0
East Geduld Mines	61.7	82.6	106.2
East Rand Proprietary Mines	34.4	40.0	50.0
Ferreira Estate	259.2	280.0	
Geduld Proprietary Mines	65.1	61.5	68.7
Geldenhuis Deep	39.0	100.0	50.0
General Mining and Finance	24.4	25.0	
Globe and Phoenix	52.2	44.0	
Government Gold Mining Areas	64.2	34.2	40.0
Grootvlei Proprietary Mines	23.1	44.1	50.0
H. E. Proprietary	23.2	30.0	
Luipaards Vlei Estate and Gold Mng.	51.8	77.5	62.5
Modderfontein B Gold Mines	35.0	11.0	nil
Modderfontein East	31.9	30.5	22.5
Nigel Gold Mining	22.2	6.2	nil
Rand Leases Gold Mining	22.1	24.4	31.2
Rand Mines	136.4	104.0	130.0
Rand Selection Corporation	37.2	40.0	40.0
Rezende Mines	34.5	7.1	8.3
Rietfontein Consolidated Mines	28.9	46.5	52.5
Robinson Deep	38.6	21.0	
Simmer and Jack Mines	22.3	17.3	23.3
South African Land and Exploration[4]	78.8	66.5	100.0
Springs Mines	30.2	9.5	10.0
Strathmore Consol. Investment	46.0	60.0	nil
Sub Nigel	123.5	103.0	87.5
Taquah and Abosso Mines	29.1	8.5	nil
Union Corporation	60.3	49.2	
West Rand Consolidated Mines[5]	22.0	22.5	30.0
Western Reefs Exploration and Dev.	20.8	34.0	50.0

[1] Blanks in this column indicate that returns are lacking or incomplete.

[2] De Beers preferred paid 40 per cent annually during this period.

[3] This is the annual average for 1936-51; earlier figures are unavailable.

[4] Profits of this company were derived in part from real estate sales.

[5] Deferred shares of West Rand, with a par of £25,000, paid enormous nominal dividends: 850 per cent in 1951 and 1952 and an annual average of 611.4 per cent during the 15 years starting with 1936!

TABLE 5

THE MOST PROFITABLE BRITISH MINING INVESTMENTS IN AFRICA: COAL, COPPER, TIN, AND OTHER MINES

Company	*Average Annual Return 1939-52*	*1948-52*	*Yield in 1952*[1]
COAL MINES[2]			
Amalgamated Collieries of S. Africa	12.1%	15.0%	17.5%
Apex Mines	31.3	41.0	40.0
Clydesdale (Transvaal) Collieries	20.1	20.3	21.5
Coronation Collieries	38.6[3]	30.0[4]	
Natal Navigation Collieries	16.3	23.0	25.0
Natal Steam Coal	23.9	31.0	40.0
South African Coal Estates (Witbank)	14.8	18.5	20.0
Transvaal and Delagoa Bay Investment	32.3	32.0	30.0
Tweedfontein Colliery	27.5	24.5	27.5
Tweedfontein United Collieries	16.0[3]	16.7[4]	
Vereeniging Estates	17.5	24.5	27.1
Vryheid Ry., Coal and Iron	17.1[3]	22.0[4]	
Witbank Colliery	17.2[3]	19.2[4]	17.5
TIN MINES[5]			
Amalgamated Tin of Nigeria	18.7	24.0	30.0
Bisichi Tin (Nigeria)	11.6	19.0	20.0
Daffo Tin Mines (Nigeria)	8.6[3]	10.4[4]	
Ex-Lands Nigeria	26.1[3]	38.0[4]	
Jantar Nigeria	27.1	25.0	35.0
Jos Tin Area (Nigeria)	12.2	13.5	20.0
Kaduna Syndicate (Nigeria)	57.6[3]	65.0[4]	
Kaduna Prospectors (Nigeria)	25.8[3]	26.7[4]	
Rooiberg Minerals Dev. (Transvaal)	18.3	42.0	87.5
South Bukeru Tin (Nigeria)	10.2[3]	11.0[4]	
Zaaiplaats Tin Mining (Transvaal)	25.9	46.5	70.0
COPPER AND OTHHER MINES[6]			
Messina Transvaal Development (copper)	93.0	218.0	370.0
Mufulira Copper Mines	22.0	43.0	41.2
Rhodesian Anglo American (copper)	17.8	39.0	62.5
Rhodesian Selection Trust (copper)	25.2	48.0	40.0
Rhokana Corporation (copper)	77.1	145.0	225.0
Roan Antelope Copper Mines	15.5	31.3	45.0
Associated Manganese of S. Africa	49.0	109.0	130.0
Cape Asbestos	18.6[3]	23.0[4]	
Potgietersrust Platinum	20.2	52.2	100.0
Rhodesia Broken Hill (lead, vanadium)	20.7	49.0	40.0

Rustenburg Platinum	40.6	87.6	135.0
Southwest Africa Co. (lead, vanadium)	19.8	33.7	60.0
Turner and Newall (asbestos)	15.0	19.0	25.0

[1] Blanks in this column signify incomplete data.

[2] These are all but 4 of the coal mining companies listed in the *Stock Exchange Official Year-Book* for the period covered.

[3] These are the averages for 1938-51.

[4] These are the averages for 1947-51.

[5] These are half of the tin mining companies for Africa listed in the *Year-Book*.

[6] The *Year-Book* lists only 4 other copper mining enterprises for Africa. Surely these are some of the most profitable copper mines in the world, and the same is true of the African coal, manganese, and platinum mines, although the last named were for some time quite unremunerative.

Monetary Developments in Argentina, 1852-1865

By James R. Scobie*

The thirteen years between the overthrow of the dictator Rosas in 1852 and the outbreak of the Paraguayan War form an important chapter in Argentine history. Politically, those were years of struggle during which the Argentine nation was organized under the leadership of the city of Buenos Aires. Economically, the country, as most newly established Latin American states, experienced budgetary deficits, unfavorable balance of trade and fluctuating paper currency. The monetary developments from 1852 to 1865 are vital to the explanation of the political scene. However, Argentine historians and economists have not explored this period in an effort to add another facet to the knowledge of its history. Source material is difficult to obtain, statistics are unavailable or untrustworthy; yet within these limitations, this article will attempt to present some general indications of economic history.

Though the main outline of Argentine political history during the years of national organization is well known, a brief review will focus political events which affect our subsequent discussion of monetary developments. Juan Manuel de Rosas, governor of the Province of Buenos Aires, had exercised an informal but very real control over the other Argentine provinces for the seventeen years preceding 1852. However, in 1851, Governor Justo José de Urquiza of Entre Ríos, capitalizing on political and economic discontent, combined with the Province of Corrientes and with Brazil and Uruguay to overthrow Rosas at the battle of Caseros (February 4, 1852). The formation of a constitutional national government was one of Urquiza's avowed aims in his rebellion against Rosas. In May 1852 the governors of the Argentine provinces met at San Nicolás in the Province of Buenos Aires and signed an agreement convening a constitutional congress and entrusting the national executive to Urquiza until constitutional authori-

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ties could be elected. The major political party in Buenos Aires which controlled the provincial legislature resisted the Agreement of San Nicolás on the grounds that it gave Urquiza dictatorial powers. Urquiza dissolved the legislature and proceeded with his program of national organization. Resentment in Buenos Aires spread and resulted in a revolution on September 11, 1852. The revolutionaries quickly consolidated their power and erected a semi-independent state to resist Urquiza's national organization. In December 1852 the provincial authorities in the city of Buenos Aires were the object of a counter-revolution by the opposition party which found its strength in the rural area of the province. Urquiza offered his mediation to settle the strife within the province and obtain its cooperation in the national organization. When these efforts failed, Urquiza, in March 1853, joined the struggle against the city of Buenos Aires. The city, however, possessed considerable economic and military power and finally triumphed. Urquiza was forced to admit defeat and withdrew in July 1853.

Meanwhile, representatives from thirteen provinces who had met in the city of Santa Fe adopted a constitution on May 1, 1853. Elections were held for a president and a congress, and in the absence of Buenos Aires, the capital was located in Paraná, Entre Ríos. Logically, Urquiza was elected president and the new authorities of the Confederation were installed in early 1854. Simultaneously, Buenos Aires adopted a provincial constitution that created a government independent of the Confederation. The two governments survived a period of tension and at the end of 1854 concluded agreements to stabilize relations and work for eventual unity. Unfortunately, the distinct political and economic interests of the two states caused renewed tension, and border skirmishes resulted in a break in relations in early 1856. New efforts were made to obtain national unity by measures short of war, but failing this, Urquiza was determined to secure the reincorporation of the province before the end of his presidential term. At Cepeda (October 23, 1859) he forced the army of Buenos Aires to withdraw from the battlefield. A negotiated peace followed. Buenos Aires rejoined the Confederation on condition that she be permitted to propose amendments for the national constitution.

A difficult interim period ensued during which both governments continued to function independently. Urquiza descended from the presidency and resumed the governorship of Entre Ríos. Santiago Derqui, Minister of Interior in Urquiza's cabinet, was elected president of the Confederation. In Buenos Aires, Bartolomé Mitre, who had commanded the provincial troops defeated at Cepeda, became governor. For a time these three political leaders appeared able to resolve the tensions and interests that threatened to divide the nation. But no real spirit of nationality existed; loyalty was to a person or a province and not to the nation. The political struggle between the groups which formed around Derqui, Urquiza and Mitre was renewed in the provinces. In April 1861 the Congress meeting in Paraná refused to seat the representatives from Buenos Aires, and civil war ensued.

At the battle of Pavón (September 17, 1861) Mitre gained an indecisive victory over Urquiza and took advantage of Urquiza's withdrawal to Entre Ríos to force the collapse of the Confederation. By January 1862, Urquiza had been neutralized in Entre Ríos, Derqui had fled to Uruguay, and Mitre had returned to Buenos Aires after setting in motion troops and revolutions which would place favorable governments in control of most of the provinces. As governor of Buenos Aires he assumed the authority of a provisional national executive. In May a congress of representatives from all the provinces met in Buenos Aires. The thorny problem of the location of the capital was finally settled by the temporary federalization of the city of Buenos Aires, and in October 1862 Mitre was inaugurated as president of the republic.

For two years the new administration wrestled with the consolidation of the country's financial credit, with the problems of political unity, and with difficult foreign relations with neighbors of the Pacific and the Río de la Plata. Slow progress was made in all fields, but in early 1865 Argentina found herself engulfed in an international war fighting alongside Brazil and Uruguay against Paraguay. The five years of war lasted into the administration of the following president, Domingo F. Sarmiento, and marked a hiatus in the consolidation and progress of the nation.

With this brief sketch of political events in mind, we can concentrate our attention on monetary developments. In the

nineteenth century, the financial situation of the Argentine government was determined by three major considerations: the only important source of revenues was supplied by customs, and these were almost entirely collected in Buenos Aires, the principal port of the nation; until the very end of the century, the nation experienced an unfavorable balance of trade; the costs of administration and of internal and external war far outran the limited revenues of the country and resulted in large budgetary deficits. The control of the customhouse of Buenos Aires and the problem of covering budgetary deficits occupied the attention of the statesmen and politicians of Argentina, while the more basic problem of the unfavorable balance of trade was deferred and eventually solved by the increase of meat and wheat exports at the end of the century.

The financial key to national organization rested in the customhouse of Buenos Aires. Rosas had been able to exercise *de facto* control over the provinces largely because he collected custom revenues on all commerce entering or leaving Buenos Aires. His downfall occurred when the provinces of Entre Ríos and Corrientes combined with Brazil and Uruguay in rebellion against the restriction of navigation on the Paraná and Uruguay rivers and the monopoly of commerce held by Buenos Aires. The political phenomenon of Rosas passed from the scene, but the economic circumstance which made possible the dictatorship—the position of Buenos Aires as the nation's principal port and collector of revenues—remained. In order to assure his program of national organization, Urquiza was given power to regulate navigation and revenues by the Agreement of San Nicolás.[1] The proposed surrender of the customhouse, which was regarded as a provincial possession, to the governor of another province met strong resistance in Buenos Aires. Two *Porteño* (of or pertaining to the city of Buenos Aires) spokesmen, Bartolomé Mitre and Vélez Sársfield, pointed out the dangers of giving this economic

[1] Article XVI of the Agreement of San Nicolás gave Urquiza certain vague powers: "Será de las atribuciones del Encargado de las Relaciones Esteriores, reglamentar la navegación de los ríos interiores de la República, de modo que se conserven los intereses y seguridad del territorio y de las rentas fiscales. . . ." *Rejistro Nacional*, III:15.

power to Urquiza.[2] The September revolution, which wrenched the political and economic control of Buenos Aires away from Urquiza, marked, among other things, the reassertion of *porteño* possession of the principal source of revenues in the nation. The only practical funnel for commercial exchange between the world and Argentina was Buenos Aires; from this flow of commerce, a provincial and not a national treasury now skimmed the proceeds.

Closely related to the Buenos Aires customhouse was the provincial money house and bank, a second source of the economic power of the province. In the early days of independence from Spain, government expenses had been met by forced loans. However, in 1822 a discount bank was opened in Buenos Aires under the auspices of the provincial government

TABLE OF PAPER MONEY ISSUES BY THE PROVINCE OF BUENOS AIRES, 1822–54[3]

1822–26	The Bank of Buenos Aires	2.694.856
1826–36	The National Bank	12.588.684
1836–54	The Money House	
	Law of March 11, 1837	4.200.000
	Law of December 8, 1838	16.575.000
	Law of September 12, 1839	3.605.854
	Law of March 28, 1840	12.000.000
	Law of January 16, 1846	75.056.666
	Law of January 16, 1852, and Decree of April 3, 1852	10.300.000
	Decree of July 31 and September 1, 1852	13.500.000
	Law of January 5, 1853	20.000.000
	Law of March 3, 1853	4.000.000
	Law of April 8, 1853	8.000.000
	Law of May 17, 1853	10.000.000
	Law of June 22, 1853	25.000.000

[2] Mitre's opposition to the Agreement of San Nicolás was based on the argument against vesting irresponsible power in Urquiza's hands. In the provincial legislature on June 21, 1852, he said:

"Aunque no use [Urquiza], aunque no abuse, siempre será un déspota, porque déspota como lo he dicho y demostrado antes, es todo aquel que no tiene ley que le dé norma, entidad que le sirva de contrapeso, ó poder ante el cual sea real y positivamente responsable de sus acciones. Esa autoridad puede disponer de las rentas nacionales, sin presupuesto y sin dar cuenta á nadie. Puede reglamentar la navegación de los ríos como si fuera un cuerpo legislativo y soberano." *Diario de Sesiones de la Sala de Representantes de la Provincia de Buenos Aires del año 1852*, 71.

[3] *El Banco de la Nación en su Cincuentario* (Buenos Aires, 1941), 110.

to issue a limited amount of inconvertible paper money. Four years later under the pressures of war with Brazil, the bank was transformed into a national bank and more money was printed. Rosas dissolved the national bank in 1836, but replaced it with a money house which continued to print and issue paper money. After the fall of Rosas, the very *porteños* who had censured Rosas for issuing enormous amounts of paper money were forced to continue the printing of currency by the money house. Though the peso had depreciated tremendously since 1822, the commerce of Buenos Aires was accustomed to the use of paper currency, and in the absence of sufficient silver or gold coin, it was used widely in commercial transactions. The steady revenue which the province received from the customhouse and the optimism concerning future economic expansion in the province provided a fairly stable base for the quantities of inconvertible paper money in circulation. Thus, during the counter-revolution of December 1852 and the intervention by Urquiza in 1853, the provincial money house was able to print money for emergency expenditures. A naval blockade of the port reduced shipping and consequently real revenues dropped,[4] but even this difficulty was finally overcome by purchasing the loyalty of Urquiza's fleet commander for 26,000 ounces of gold.

In 1854 the provincial money house was expanded to include banking functions. While it remained a state bank and issued inconvertible paper money upon authorization by the legislature, it also received private deposits and offered loans and credit. The expansion of the provincial bank and money house during the ten years following 1854 was enormous; its capital rose from 4,112 silver pesos and 5,312,109 paper pesos in 1854 to 4,745,680 silver pesos and 11,900,106 paper pesos in 1864.[5] During the years of semi-independence while the Province of

[4] The effect of a blockade on the port of Buenos Aires, as Rosas found out during the French and English intervention, drastically reduced revenues from customs. The blockade by the Confederation forces in 1853 cut overseas shipping from a tonnage of 12,212 in December 1852 to 1610 in May 1853, while river trade declined in the same period from 5,130 to 1,103. For the month of July 1853, when the blockade had been lifted, tonnage was back up to 11,177 for overseas shipping and 6,737 for river commerce. Figures from *El Progreso* (Buenos Aires), 1852-3.

[5] The comparative balance of the bank's statements in the years 1854 and 1864 is taken from *El Banco de la Nación, op. cit.*, 95.

	1854		*1864*	
	Metálico	*Moneda Papel*	*Metálico*	*Moneda Papel*
Depósitos	103.133	11.176.484	2.844.936	341.205.216
Letras a cobrar	———	10.948.693	2.846.921	149.054.266
Capital	4.112	5.312.109	4.745.680	11.900.106
Emisión	———	210.521.060	———	235.247.656
Tesoreria	100.986	1.677.374	1.071.997	5.433.025

Buenos Aires controlled the custom revenues of the port, the provincial government was able to meet normal operating expenses from the proceeds of the customhouse, relying on new issues of paper money by the provincial bank to cover the emergency expenses of war.

The financial position of the Confederation was logically far more difficult than that of Buenos Aires. While Buenos Aires possessed the principal source of revenues in the nation and controlled a banking structure which issued inconvertible paper currency, the Confederation lacked any such revenues or financial structure. The ports of the littoral provinces of Santa Fe, Corrientes and Entre Ríos provided a small amount of custom revenues, but this was not sufficient to pay for normal operating expenses of the Confederation's administration. In Buenos Aires the paper peso was accepted alongside foreign metallic currencies, but in the Confederation no paper currency circulated and foreign monies were scarce. Common to most Hispanic countries was the doubloon or gold ounce, with its subdivisions in gold and silver coins. These coins originated in colonial times and were maintained, though in debased form, by the governments after independence. In Argentina the doubloon was known as the gold ounce of sixteen silver pesos, but the gold and particularly silver coins tended to leave circulation or to be exported to redress the unfavorable balance of trade. The principal currencies in the Confederation, therefore, were Chilean gold coins (the western Argentine provinces had a favorable balance of trade with Chile), debased Bolivian silver pesos, and a limited amount of French gold coin brought in by immigrants. The monetary unit of the Confederation, the silver peso, was worth roughly twenty paper pesos of Buenos Aires.

The developments of the years 1853 to 1861 when the governments of Buenos Aires and of the Confederation supported separate financial structures prove our statement that the economic key to national organization lay in the customhouse

in Buenos Aires. When Urquiza moved to support the counter-revolution in the Province of Buenos Aires in March 1853 he found it impossible to raise the half million silver peso loan authorized by Congress and had to content himself with 225,000 pesos borrowed at 16 percent interest from the Spanish financier, José de Buschenthal, in Montevideo. After the withdrawal of Urquiza from the siege of Buenos Aires, the statesmen in Paraná attempted to solve the Confederation's financial difficulties by the creation of a complex financial structure that would administer the collection of revenues and regulate public credit, banking operations, and many activities of the Ministry of Finance. Fundamentally, the public credit law of December 1853 sought to place in circulation the paper equivalent of 6 million silver pesos.[6] However, this venture into paper currency and banking was doomed to failure since the provinces were unwilling to accept paper in place of coins, and the absence of substantial custom revenues caused distrust of the measure. Before the end of 1854 the whole financial structure had to be liquidated. Nevertheless, the Confederation did not lose hope of creating a banking structure similar to that possessed by Buenos Aires. In 1855 Buschenthal was granted concessions that authorized him to seek loans in Europe for railroad construction, current operating expenses of government, and the formation of a national bank. His inability to raise funds caused the government to embark on a series of ventures aimed at attracting a foreign concessionaire to establish a national bank in the Confederation. The result was the establishment at the end of 1857 of the Mauá Bank in Rosario (financed by the Brazilian investor, the Baron of Mauá), and a loan of 300,000 silver pesos to the Confederation from the Brazilian government. The bank never flourished and was liquidated in 1860 by mutual agreement between the Confederation and the Baron of Mauá.

During these years the Confederation attempted to break the natural monopoly held by Buenos Aires over the commerce of Argentina. Free navigation of the interior rivers had been confirmed by international treaties with France, Great Britain and the United States. Since the natural channel of trade continued to be located in Buenos Aires, efforts were made to stimulate trade through other river ports and thus bring a

[6] *Rejistro Nacional*, III:82-92, #3070, December 17, 1853.

portion of custom revenues to the Confederation. In July 1856 Congress sanctioned a law of differential tariffs charging a double rate against goods entering the Confederation via Buenos Aires or Montevideo, thus supposedly encouraging direct shipment from Europe to Confederation ports. The effect of the legislation was largely destroyed by the world depression of 1857 which discouraged commerce from opening new outlets and by the enormous profits which could be made by smuggling goods from Buenos Aires or Montevideo. At no time did the differential tariff promise a solution to the Confederation's financial difficulties, and its failure was summarized by the Confederation's commercial agent in Buenos Aires: "A commercial revolution cannot be effected with a flourish of the pen, and the only means to obtain it, is to offer concessions so that, little by little, commerce will accustom itself."[7]

As the two governments drifted toward the civil war which ended in Cepeda, their economic mobilization gives us further insight into the financial inequality between the administrations in Paraná and in Buenos Aires. Loans granted the Confederation were extended with the understanding that the reincorporation of Buenos Aires would provide custom revenues for their redemption. Buschenthal, customary creditor of the Confederation, purchased 1½ millions worth of government bonds for 1,125,000 silver pesos.[8] Short term, 2 percent treasury bonds were issued to pay expenses usually met by customs collected in the Confederation ports and now pledged to service the Buschenthal loan.[9] As the expected invasion of Buenos Aires was postponed due to diplomatic difficulties in arranging for a Paraguayan alliance and a serious drought which halted cavalry operations, the Confederation was forced to increase tariffs 8 percent and salvage its credit with Buschenthal by leasing him rights on the customhouses of the Province of

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[7] Letter from Daniel Gowland, Buenos Aires, to Justo José de Urquiza, June 28, 1857, *Historia de la Nación Argentina*, VIII:325, footnote #1.

[8] *Rejistro Nacional*, IV:194, #4754, May 10, 1859. Additional clauses of this agreement stated that one-third of the customhouse revenues, including that of Buenos Aires when reincorporated in the nation, would be allocated to the amortization of this loan, and that no future loans would be issued on this revenue until the loan had been fully paid.

[9] *Ibid.*, 199, #4774, June 20, 1859.

Santa Fe for two years.[10] In return, Buschenthal opened a special monthly credit of 12,000 silver pesos for war expenses.[11]

Buenos Aires, meanwhile, was able to finance its mobilization with issues of paper money guaranteed with a fund established from 10 percent of custom receipts and a certain part of the profits from recently authorized land sales. In mid-July the provincial assembly authorized the bank to issue 30 million paper pesos, followed in mid-October and mid-November by authorizations for 30 million and 25 million respectively.[12] There was little depreciation in the value of the paper peso, and even at the height of the conflict Buenos Aires was amortizing the issues at the rate of a half million pesos per month.[13]

According to the peace terms which followed the battle of Cepeda, Buenos Aires was reincorporated in the Confederation pending revision of the Constitution of 1853, nationalization of the *porteño* customhouse with a reciprocal guarantee of the Buenos Aires provincial budget for five years by the Confederation, and the demobilization of the armies on both sides. For the moment, however, Buenos Aires remained in control of the customhouse and the Confederation tottered on the verge of bankruptcy. The Governor of Tucumán observed some six months after Cepeda: "It is no secret that as a result of the recent war, the present government [of the Confederation] finds itself without a cent and with a floating debt on its shoulders."[14] Although commercial relations were restored, the differential tariff rescinded, and a commissioner appointed to hold conversations with Buenos Aires concerning the nationalization of the customhouse, there was no relief for the exhausted Confederation treasury. In a moment of tension in April 1860, when it was feared that Buenos Aires would rebel once more against the Confederation, a rapid trip was

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[10] *Ibid.*, 221, #4842, August 30, 1859, and 223-5, #4853, August 30, 1859.

[11] *Ibid.*, 225, #4854, September 10, 1859.

[12] Issues of July 16, October 11, and November 24, 1859. The exact status of the latter issue of 25 million pesos is not clear, since it is often omitted in contemporary consolidations of the provincial debt. The issue may have only been authorized but never placed in circulation.

[13] The amortization of the July 16, 1859, issue started almost immediately: September 15, 475,000 pesos; October 15, 420,000 pesos; November 18, 585,000 pesos.

[14] Letter from Marcos Paz, Tucumán, to Juan Pujol, April 24, 1860, *Corrientes en la organización nacional* (Buenos Aires, 1911), X:66.

made by the Minister of Interior to Paraguay to seek a loan of a half million silver pesos to bolster the government.[15]

The procedure of reintegration of Buenos Aires in the Confederation moved forward slowly. A provincial convention met in Buenos Aires to propose reforms for the national Constitution, mainly directed at protecting the provincial sovereignty against interference by a national government. One of the essential reforms guaranteed the principle of equal taxation, thereby preventing any future effort to upset the Buenos Aires monopoly of Argentine commerce by means of differential tariffs.[16] In June 1860 one of Buenos Aires' leading jurists, Vélez Sársfield, traveled to Paraná to conclude final arrangements for the incorporation of Buenos Aires in the Confederation. The instructions given that mission demonstrate that Buenos Aires had no intention of surrendering control of the customhouse to a national government which she did not direct. The commissioner was instructed, in face of the imminent nationalization of custom revenues, to secure in the hands of Buenos Aires' personnel that part of the financial administration. As regarded the national guarantee of the provincial budget, the commissioner was to obtain assurances that the entire budget was included, even to the extent of payments on the internal and foreign loans and the expenses of the provincial army.[17] The final agreement permitted Buenos Aires to retain the administration of her tariff

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[15] Letter from Juan Pujol, Corrientes, to Justo José de Urquiza, April 29, 1860, accompanied by a memorandum by Juan Pujol, Humaitá, April 27, 1860, Archivo del General Urquiza, 1860, Archivo General de la Nación, Buenos Aires. The loans was not concluded because Francisco S. López, the Paraguayan representative, insisted on a territorial settlement.

[16] Mitre, one of the spokesmen in the reform of the Constitution, presented these views in a series of four articles in *El Nacional* (Buenos Aires) on January 31, February 7, March 10 and 22, 1860. Subsequently, in the report which he wrote for the committee drawing up reforms, he stressed the "perfect equality between all" guaranteed by the United States Constitution which he believed underlay the strength of that republic and harmonized the interests of agricultural, commercial and manufacturing groups. *Informe de la Comisión Examinadora de la Constitución Federal presentado a la Convención del Estado de Buenos Aires* (1860), 35.

[17] Instructions to Dalmacio Vélez Sársfield in Mitre's handwriting, Cartas inéditas del Archivo del General Mitre, #9534, Museo Mitre, Buenos Aires.

revenues and army as an independent state until her representatives were incorporated in Congress and could participate in making new provisions. In return, Buenos Aires would subsidize the Confederation treasury with 1½ million paper pesos monthly. As part of the gradual reincorporation effected in the initial months of Derqui's presidency, Norberto de la Riestra, a *porteño* statesman, was called to Paraná to take charge of the Ministry of Finance and to guide a new tariff law through Congress. The formidable problem of the surrender of the Buenos Aires customhouse seemed to be well on the way to solution in late October 1860 when Mitre wrote Riestra indicating his approval of a measure to nationalize custom revenues on December 1.[18]

However, political events plunged the two governments once more into civil war in 1861. The financial arrangements concerning custom revenues and the guarantee of the provincial budget were listed among the principal causes for the renewed strife.[19] As in the mobilization for Cepeda, Buenos Aires issued paper money to cover the emergency expenses, while the Confederation resorted to various devices to support its exhausted treasury. Both systems, however, faced a situation where the enormous expenses of civil war could not be met indefinitely by loans or printing paper money in an underdeveloped country such as Argentina. In April 1861 excess spending of 18 million paper pesos over budgetary allotment caused the provincial assembly of Buenos Aires to create 24 million pesos worth of government bonds to cover this deficit. At the end of June when hostilities became inevitable, the assembly authorized the bank to issue 50 million paper pesos. The value of the peso depreciated considerably due to this new issue, but the stability of the government gave commerce

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[18] Copy of a letter from Bartolomé Mitre, Buenos Aires, to Norberto de la Riestra, October 29, 1860, #10,085 in cited archive.

[19] Letter from Bartolomé Mitre, Buenos Aires, to Justo José de Urquiza, January 26, 1861, *Archivo del General Mitre* (Buenos Aires, 1911-13), VII:179. In February, 1861, when Mitre asked the aid of the British consul to the Confederation to resolve the political crisis, he listed the tariff question as one of the three problems "which menaces the opening of the National Congress by dissolution or anarchy." Letter from Bartolomé Mitre, Buenos Aires, to Edward Thornton, February 25, 1861, Cartas inéditas del Archivo del General Mitre, #10,156, Museo Mitre.

TABLE OF THE ANNUAL AVERAGE OF THE EXCHANGE RATE OF THE BUENOS AIRES PAPER PESO TO THE GOLD OUNCE[20]

1826	30	1853	311	1858	364
1830	118	1854	321	1859	351
1840	374	1855	339	1860	344
1850	247	1856	347	1861	386
1852	274	1857	336		

the necessary confidence to maintain its circulation.[21] The nationalization of the Buenos Aires custom revenues was cancelled in the same month.[22] Just before Pavón, the government of Buenos Aires authorized the issue of another 50 million paper pesos, resulting in a further depreciation of the peso.[23]

The Confederation, burdened with debts accumulated since 1852, found its credit in the foreign loan market exhausted. The Province of Entre Ríos, which had largely supported the administration of the Confederation during Urquiza's presidency, was able to do little for the Confederation in the present situation. Though Urquiza had stated that Entre Ríos would come to the aid of the Confederation if Buenos Aires withdrew its financial aid, the true state of affairs in that province was described by the local Minister of Government in a letter to Urquiza:

> Your Excellency well knows that financial resources are the soul of the administration and the basis of its existence. The revenues of this province do not cover its most urgent necessities.
>
> The expenses of the administration's personnel, at its minimum, amount to twenty-five or thirty thousand [silver]

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[20] *El Banco de la Nación, op. cit.*, 115.

[21] The exchange value of the paper money of Buenos Aires in terms of the gold ounce, which had fluctuated between 350 and 370 during the first five months of 1861, suddenly rose to 390 and then to 400 by the end of June, daily quotations from *El Nacional*, 1861.

[22] Communication from the government of Buenos Aires to the Minister of Finance of the Confederation, June 5, 1861, published in *La Tribuna* (Buenos Aires), June 7, 1861, p. 2.

[23] Law of September 4, 1861. The exchange rate, which had risen to somewhat over 400 after the first issue of 50 million pesos at the end of June and then fallen back to around 390, rose once more to the neighborhood of 415 and fluctuated in the 400's for the remainder of the year.

pesos monthly. The estimated revenues of the province will cover the most urgent expenses until July or August; the rest of the year will present an absolute *deficit*.[24]

By the end of May 1861 the financial needs of the Confederation had become so pressing that the government momentarily suspended the acceptance of treasury notes and took only metallic monies in payment of tariff charges.[25] The resultant complaints by note holders forced the revocation of the decree, but the plight of the Ministry of Finance was indicated by the accompanying prologue to the decree: "The patriotic sentiments and intelligence of the honorable members of the sovereign Congress should be able to encounter the means and recourses to save the government from the absolute penury in which the national treasury finds itself, not only to pay operating expenses but to meet extraordinary obligations demanded by the present situation."[26] Financial relief was sought in a loan of a half million silver pesos from a local capitalist, Antonio Fragueiro, to cover the expenses of an intervention in the Province of Córdoba. Government promissory notes were sold at an enormous discount to obtain funds for the defense of Rosario, while an attempt was made to raise a loan in Paraná to pay the salaries of congressmen.[27] As the costs of mobilization rose, Congress imposed increases of 3 to 6 percent on import duties in an effort to augment revenues, while the government cast about desperately for a loan of 6 million silver pesos.[28]

Mediation efforts which occurred in the months just preceding Pavón were obstructed by a financial matter that entered the negotiations. A suggestion had been made in mid-July by representatives of France, Britain and Peru that the existence of two governments in Paraná and Buenos Aires be continued until 1864 and that Buenos Aires contribute a monthly subsidy of 2 million paper pesos to the Confederation

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[24] Letter from Luis J. de la Peña, Uruguay, to Justo José de Urquiza, April 22, 1861, Archivo del General Urquiza 1861, Archivo General de la Nación.

[25] *Rejistro Nacional*, IV:397, #5434, May 31, 1861.

[26] *Ibid.*, 398, #5439, June 2, 1861.

[27] *Ibid.*, 398, # 5441, June 6, 1861, and 402, #5458, July 1, 1861.

[28] Law of August 16, 1861, published in *El Nacional*, August 27, 1861, p. 2.

in the interim.[29] When actual talks were initiated in August between the commissioners for Buenos Aires and the Confederation, the *porteño* government instructed its representative to offer only 750,000 paper pesos.[30] The tariff and subsidy questions were only two among many which caused the break-off of negotiations, but once again the customhouse of Buenos Aires was shown to be a dominant factor in the organization of the nation.

Faced with the penury of the treasury, much of the cost of preparing the Confederation army had been paid for by Urquiza on a private basis. Therefore, his withdrawal to his own province and his abandonment of the Confederation after the indecisive battle of Pavón placed the government in Paraná in desperate straits. Renewed efforts were made to raise loans from local merchants in Santa Fe, Corrientes and Entre Ríos, and 100,000 silver pesos in treasury notes were issued. The lack of funds to cover even the most necessary expenses caused the Vice-President to appeal to Urquiza for 12,900 silver pesos to pay the fleet, without which there was a definite danger of losing it to Buenos Aires' intrigue.[31] The absolute bankruptcy of the Confederation was dramatically emphasized in a subsequent letter from the Vice-President in late November:

> We no longer know what means to use, even to supply our fleet with rations, taking into consideration that no other expenses have been met and no employee has been paid more than half his salary for the last seven months.
>
> In such a crisis we have called upon the poverty-stricken commerce of this city to attempt to raise a loan of twenty thousand pesos and have not obtained even twenty pesos.
>
> We resorted to the emission of one hundred thousand pesos in treasury notes, amortizable in payment of all taxes, and because of the poverty, lack of patriotism or bad faith of these capitalists, or for other reasons, despite the backing of that paper, it suffered a loss of value of some

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[29] Act of July 15, 1861, Buenos Aires, *Archivo del General Mitre*, VIII:12-3.

[30] Letter from Pastor Obligado, Buenos Aires, to Norberto de la Riestra, August 12, 1861, Cartas inéditas del Archivo del General Mitre, #9074, Museo Mitre.

[31] Letter from Juan E. Pedernera, Paraná, to Justo José de Urquiza, November 8, 1861, Archivo del General Urquiza, 1861, Archivo General de la Nación.

seventy percent before fifteen days had passed, so that such a procedure has been neutralized.

On the other hand, we can count only on the customhouses of this capital, Victoria and Gualeguay, which are not already allocated to the payment of previous credits, since half the revenues of Corrientes are earmarked for the loan which Derqui contracted on his departure for Córdoba and the other half are placed at the disposal of the provincial government for the war preparations which have been ordered.

In conclusion, I repeat my opening words: "Our penury is absolute and complete. Our credit amounts to nothing."[32]

The failure or impossibility of Urquiza to aid the Confederation financially or militarily combined with the results of the Urquiza-Mitre negotiations to arrange the dissolution of the Confederation.

The collapse of the Confederation left the field clear for Buenos Aires to attempt the reorganization of the nation. It also relieved Buenos Aires of a serious financial crisis that threatened to engulf the economy when a further emission of paper money was rumored in late November. A point of saturation had been reached in the issuance of paper money which made the value of the peso particularly vulnerable to political developments. Repeated assurances by the Buenos Aires government that it would not resort to a further issue of money had no effect on the rapid depreciation of the peso.[33]

AMOUNT OF PAPER MONEY IN CIRCULATION IN BUENOS AIRES ON JANUARY 1 OF 1859 TO 1862[34]

1859	210,247,656
1860	283,037,656
1861	285,192,656
1862	378,717,656

The downward spiral halted abruptly, though, on December 6 and 7 when news arrived in Buenos Aires confirming Urquiza's definite withdrawal from the struggle and the dissolution of

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[32] Letter from Juan E. Pedernera, Paraná, to Justo José de Urquiza, November 25, 1861, in cited archive.

[33] Official declaration by the provincial government stating that no new issue of paper pesos would be made, *El Nacional*, November 27, 1861, p. 2.

[34] *Registro Estadístico de la Provincia de Buenos Aires, 1859-62.*

the Confederation.[35] The necessary funds to continue the reorganization of the nation under *porteño* leadership were provided by the creation of 50 million pesos worth of government bonds bearing an annual 9 percent interest.[36] The full weight of the Buenos Aires customhouse and financial structure was placed behind the program of national reorganization when the provincial assembly approved projects making the governor of Buenos Aires provisional executive of the nation and authorizing him to convene a congress of the provinces. Recalling his own opposition to the grant of unlimited authority to Urquiza in 1852, Mitre hastened to issue a decree specifically limiting the general powers granted him by the assembly. Relative to financial matters, the decree stated: "As regards internal affairs, the functions of the provincial national executive will be limited . . . to collect and receive the national revenues placed in his charge, attending to their inversion and rendering opportune account to the Congress. . . ."[37]

The Argentine financial and monetary scene was so dominated by the two all-consuming considerations of controlling the custom revenues and meeting budget deficits by loans or issues of paper money, that little attention was paid to the third matter of the unfavorable trade balance. Indeed before 1861 no trade figures on the national level are readily available. It seems certain that there was an upswing in trade following the lifting of the Anglo-French naval blockade during the Rosas period, and ship entries into Buenos Aires continued to rise in number throghout the period of semi-independent status from the Confederation. However, though the volume of trade increased sharply, the balance of trade did not favor Argentina. The shortage of gold and silver coin indicated that this medium of exchange was being drained abroad to redress the unfavorable balance, and as yet there was no large inflow of foreign capital investment.[38] After

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[35] The rate which had been fluctuating in the high 420's and 430's opened on December 6 at 431 and closed at 411½, and on the 7th, opened at 411 and closed at 400.

[36] Project, December 3, 1861, *Revista Comercial y Administrativa* (Buenos Aires), December 4, 1861, p. 2.

[37] *Rejistro Nacional*, IV:425-6, #5570, April 12, 1860.

[38] See John H. Williams, *Argentine International Trade Under Inconvertible Paper Money, 1880-1900* (Cambridge, Mass., 1920), especially chapters IV to IX.

1861 the unfavorable balance of trade continued almost uninterrupted until 1891 when the exportation of chilled and frozen meat and of wheat reached sufficient quantities to create a favorable balance of trade.[39]

In 1862 a national government came into existence, first as a provisional executive and then as a constitutional administration. The economic key to national organization—custom revenues—was secured in the hands of that government. But the consideration of budgetary defiicit remained, made all the more difficult by the accumulated costs of civil war which now demanded liquidation. The immediate problem which faced the Mitre administration was that of the paper money of Buenos Aires. The existence of 378,717,656 paper pesos in circulation at the beginning of 1862 exposed the peso to serious fluctuations in value at the slightest sign of an economic or political reverse to the program of national reorganization. The issues of 1861 amounting to 100 million pesos were guaranteed by additional 5 percent import and export tariffs that theoretically would amortize the issues within six years. However, the depreciation of the peso virtually destroyed the expected income from the additional tariffs, and the problem of maintaining such a quantity of paper money in circulation without a further loss of value preoccupied the government. In March 1862, the Buenos Aires government published an agreement encouraging the use of paper money in all government transactions.[40] A week later, the Minister of Finance addressed a communication to the three leading meat salters (*saladeristas*) of Buenos Aires requesting that they combine with other members of their business to use paper currency in their financial transactions.[41] In June a project was evolved to create a fund for the more rapid redemption of paper pesos

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[39] Francisco Latzina, *Estadística retrospectiva del comercio exterior argentino 1875-1904* (Buenos Aires, 1905), 228. From 1861-91, only five years show a favorable trade balance: 1876-7 and 1879-81. From 1891 to 1904, only the year 1893 showed an unfavorable balance. Some of the reasons are given in Simon G. Hanson, *Argentine Meat and the British Market: Chapters in the History of the Argentine Meat Industry* (Stanford, Cal., 1938).

[40] *El Nacional*, March 11, 1862, p. 2.

[41] Communication from Norberto de la Riestra to Mariano Saavedra, A. Cambareres, and A. P. Lezica, published in *La Tribuna*, March 19, 1862, p. 2.

by the sale of 6 percent government bonds, but it was rejected by the provincial assembly.

Parallel with the difficulties experienced in Buenos Aires with paper money, the provinces, particularly Entre Ríos, suffered from the heritage of Cepeda and Pavón. When the formation of the provisional national executive resulted in a request for all provinces to turn over their customhouses to national authorities, Urquiza appealed to Mitre for a monthly subsidy, basing his request on the crisis suffered by the provincial treasury during the civil wars and the credit of almost a half million silver pesos which the province had advanced to the Confederation. In accordance, Mitre agreed to a monthly subsidy of 10,000 silver pesos to Entre Ríos in return for the surrender of the provincial customhouse.

When the national Ministry of Finance initiated its labors in October 1862, the task which confronted it was enormous. With resources which had been barely sufficient to meet the normal operating expenses of the Province of Buenos Aires, the ministry had to take on the responsibilities of a national administration, meet emergency expenses and repay the cost of years of civil war. Buenos Aires had financed her efforts in the campaigns of Cepeda and Pavón largely by the issue of paper money, with the result that from January 1, 1859, to the beginning of 1862, the paper money in circulation in Buenos Aires increased by 168,470,000 pesos, an increase reflected in the fall of value of the paper peso from 340 to the gold ounce to 400. The Confederation had financed its mobilization by different means, for it did not possess the customhouse of Buenos Aires or a provincial bank to issue paper money or a public that would accept inconvertible paper currency. A fairly accurate idea of the bond issues, treasury notes, promissory notes and other extraordinary loans of the Confederation can be obtained from the amounts recognized as the consolidated debt and floating debt of that government. The first amount totaled 4 million silver pesos, comprised of 3 millions worth of government bonds issued by the Confederation to consolidate the public debt previous to October 1, 1860, and an additional million created on that date.[42] The floating debt of the Confederation—charges issued on the treasury between April 1, 1861, and the collapse of the gov-

[42] *Rejistro Nacional*, IV:507, #5748, November 5, 1862.

ernment on December 12, 1861, was consolidated in accordance with the law of November 1863 and amounted to 3,716,373.12 silver pesos.[43]

Therefore, the total public debt incurred by Buenos Aires and the Confederation during the period 1859 to 1862 amounted to some 16 million silver pesos (320 million paper pesos). The problem of reducing this debt was approached by the national executive in September 1862, when a law was enacted stating that, in addition to the yearly sum of 6,500,000 paper pesos which the treasury was to allocate from normal revenues to the Province of Buenos Aires for the amortization of the issues of 1859, the revenues derived from the additional import and export tariffs would be allocated as follows: 23,500,000 paper pesos to the amortization of the issues of 1861 and whatever remained to the public debt of the Confederation.[44] In accordance with the settlement made after Cepeda, Buenos Aires had agreed to surrender her customhouse revenues to the nation on the condition that her provincial budget as of 1859 be guaranteed by the nation for a period of five years. A law in July 1862 confirmed this arrangement, and a subsequent division of items in the provincial budget determined those to be covered by the nation and by the province.[45] Accordingly, items such as the Ministry of Foreign Relations and a large part of the Ministry of War passed to the national budget, and the annual expenses of the province were determined as 27,257,097 pesos. When interest and amortization charges on the issues of government bonds and the consolidated British loan were added, the total provincial expenses amounted to an annual 34,036,947 pesos. Provincial revenues were calculated at the sum of 10,036,947, leaving 24 million pesos as the deficit to be covered by the national government.[46] This amount was in addition to the 30 million pesos (23,500,000 from additional tariffs and 6,500,000 from regular revenues) which the national government was to pay the province for the withdrawal from circulation of the issues of 1859 and 1861. A total of 54 million

[43] *Informe presentado por el P. E. al Congreso Nacional sobre la deuda del gobierno de la Confederacion mandado consolidar por la ley de noviembre de 1863*, Anexo A. Report of the commission, January 18, 1864.

[44] *Rejistro Nacional*, IV:472-3, #5666, September 3, 1862.

[45] *Ibid.*, 480-2, #5689, October 3, 1862.

[46] *Ibid.*, 521-4, #5768, November 25, 1862.

paper pesos a year was the charge resting on the treasury as the settlement with the Province of Buenos Aires in amortization of her paper issues and in return for the surrender of the customhouse.

The settlement of the Confederation's share of the national debt was delayed somewhat longer, though the 4 millions of government bonds issued previous to April 1861 were recognized and the excess revenues from the additional tariff were credited to the interest payment and amortization of this debt.[47] The floating debt of the Confederation (charges issued after April 1861) was recognized and ordered consolidated in the form of government bonds bearing 6 percent interest.[48]

Although these measures apparently established the means to reduce the debt incurred by the years of civil war, the form which a large portion of the Buenos Aires debt took—paper money—seriously handicapped the financial administration of the nation. The paper peso was the primary legal tender in the province which produced almost the entirety of the national revenues.[49] Payment of customs was made largely with this paper which the government, not wanting to devaluate officially, accepted at the rate of 340 to the gold ounce with a resultant loss of 12 to 15 percent in revenues. Some government expenses such as the 54 million annually to the Province of Buenos Aires could be paid in paper; however, other charges on the consolidated debt of the Confederation or on the British loan had to be met in gold, entailing a further loss to the government. Furthermore, as the Minister of Finance observed, the fluctuating value of paper money hindered any sound economic planning by the government. "In this situation, it is impossible to establish a fixed value for any calculation or budget, subjected as is the public administration and the people who support it, to the shocks more or less violent given it by the inconsistency of the current exchange or the losses

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[47] *Ibid.*, 500-1, #5732, October 23, 1862.

[48] *Ibid.*, 506, #5745, November 1, 1862.

[49] In 1863, for example, the revenues of the national government amounted to 6,853,492.30 silver pesos, almost all coming from tariff revenues; 5,445,391.82 of this sum was collected in the Province of Buenos Aires. *Memoria presentada por el ministro de estado en el departamento de hacienda al Congreso nacional de 1864*, 4.

suffered even if the exchange were stabilized at the value fixed by law."[50]

Two illuminating memorandums by the Minister of Finance, Vélez Sársfield, and one by Norberto de la Riestra published in the latter part of 1862 enable us to examine the contemporary solutions sought to solve the problem of the Buenos Aires paper money. Vélez Sársfield in his first memorandum argued that the provincial bank should be brought under the control of the national government to prevent further emission of paper money by the province and to convert existing paper into metal-backed currency issued by private banks. The present procedure of burning the 1859 and 1861 issues as they were retired from circulation by means of payments from the treasury to the provincial government was theoretically unsound since the bank still possessed the power to make new issues with the authorization of the provincial assembly. From a practical viewpoint, it was noted that so much paper was in circulation that the annual burning of several million paper pesos had little or no effect on the value of the peso. Even when all the issues of 1859 and 1861 had been withdrawn from circulation, 235,247,656 pesos lacking metal-backing and depending on the credit of the province would continue to circulate.

> It is absolutely necessary, therefore, to amortize also the paper money which rests on the credit of the province, that is to say, it is desirable and necessary to withdraw all the paper money of Buenos Aires from circulation; conclude with future emissions and place commerce and this society in the conditions to exploit its wealth and private credit in international and national relations.

In a second memorandum, Vélez Sársfield presented an alternative measure to the nationalization of the provincial bank. He suggested that the issues of 1859 and 1861 be withdrawn from circulation at the rate of 20 to the silver peso by the creation of 6 million silver pesos in government bonds bearing 6 percent interest. The monthly sum turned over by the treasury to the provincial government for destruction could then be applied to amortization of the Confederation's debt. The Minister further proposed that the paper peso be

[50] *Rejistro Nacional*, IV:525, #5769, November 24, 1862. Memoria del Ministro de Hacienda.

devaluated from its fixed rate of 340, thus increasing the real national income, and that the banking field should be opened to private banks that would issue metal-backed bills.[51]

The conclusions reached by Riestra were in basic agreement with those of Vélez Sársfield: namely, the need to stabilize the value of paper money and to establish a more rapid means of removing it from circulation. His suggestion resembled that advocated by Vélez Sársfield's second memorandum. The bank, though remaining under provincial authority, would lose its power to make further issues of paper money. Meanwhile, the bank aided by the treasury which would turn over to it 6 million silver pesos in government bonds would attempt to raise sufficient metallic funds to withdraw the paper at the rate of 20 to a new metal-backed silver peso.[52]

The application of such neat theoretical solutions was another matter, and the depreciated paper currency of Buenos Aires created problems for the national government throughout 1863. A similar though not so serious problem arising from other fluctuating paper currencies in Córdoba and Corrientes caused the national government to sign a contract with the Brazilian banking firm of Mauá to collect custom revenues outside of the Province of Buenos Aires, converting them into gold to pay charges on the consolidated debt of the Confederation.[53] A new item appeared in the national budget entitled, "Losses from the Exchange," representing the loss of revenues resulting from fluctuations in the value of the paper peso.[54]

In early 1863, symptoms of a serious financial panic gave the provincial and national governments added stimulus to take action on the matter of paper money. The immediate cause of the panic, in which the value of the paper peso fell to 449 to the gold ounce on February 7, seems to have lain in the exportation of gold to Montevideo, the activities of speculators, a shutdown of the meat salting plants and an overload

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[51] *Ibid.*, 550, #5785, December 12, 1862, Segunda Memoria del Ministro de Hacienda.

[52] Project and Memorandum, Norberto de la Riestra, December 8, 1862, published in *La Nación Argentina* (Buenos Aires), December 13, 1862, pp. 1-2.

[53] *Rejistro Nacional*, V:3-4, #5814, January 24, 1863.

[54] *Ibid.*, 9, #5837, February 28, 1863.

of products on the Buenos Aires market.[55] Underneath these superficial causes lay more basic reasons connected with the unfavorable balance of trade, the excessive quantity of paper money in circulation, and the continual budgetary deficits of the government. *La Nación Argentina*, spokesman for commercial interests in Buenos Aires, hammered away at the necessity to raise the interest rate on bank loans in order to prevent speculation,[56] while the English newspaper representing important grazing interests in the province observed: "Ounces yesterday rose to 434, and are expected to go to 600, as the commercial public places no faith in the Government or Bank. We are coming to a crisis."[57] A mass meeting of merchants and businessmen in the Colón Theater repeated the ideas already advanced in the Vélez Sárseld and Riestra memorandums, and sent a commission to discuss the matter with the provincial and national governments. Finally, the directors of the provincial bank took action to halt the runaway depreciation of the paper peso. Foreign currencies were accepted for deposit in the bank, thus hoping to increase the metal reserve, and the interest rate was raised to 12 percent on bank loans to discourage borrowing for speculation.[58] In addition, the bank announced its intention to devise some scheme to withdraw paper from circulation at a more rapid rate than by the accumulation of bank profits and by remittances from the treasury for destruction.

The measures taken by the bank momentarily averted a crisis and the exchange sank back toward 430. However, the root of the trouble continued to exist, and reverses to the national government's internal or external policies caused by the revolt of Peñaloza and by the invasion of Uruguay by Flores, both occurring in April 1863, made the paper peso fall sharply in value. In May the paper peso was devaluated by the Ministryof Finance a nd the current market value was

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[55] Communication from Luis L. Domínguez to the President of the provincial bank, February 7, 1863, *Registro Oficial de la Provincia de Buenos Aires, 1863*, 17.

[56] *La Nación Argentina*, February 6, 1863, p. 1.

[57] *The Standard*, February 6, 1863, p. 2.

[58] Communication from Jaime Llavallol to Luis L. Domínguez, February 6, 1863, and reply, *Registro Oficial de la Provincia de Buenos Aires, 1863*, 15-7.

adopted in calculating tariff charges.[59] Government salaries fixed in terms of gold or silver were paid at the current market rate of paper, while those fixed in paper were increased 25 percent.[60] The destruction of the monthly quota of paper money had no effect on the value of the paper peso;[61] at the beginning of June the exchange rate climbed back to 450 and reached the 460's in July 1863 as fear of a new civil war resulting from Peñaloza's revolution swept Buenos Aires. Even in small matters the inflation was felt; at the beginning of July the three major newspapers of Buenos Aires, *La Tribuna, El Nacional,* and *La Nación Argentina,* raised their subscription rate from 30 pesos a month to 40.

No coordinated action was taken to solve this problem of the paper currency of Buenos Aires. The provincial government was as jealous of its authority over the bank as it previously had been over the customhouse. When the provincial government sought a loan in London to redeem the paper money, the national Minister of Finance expressed disconformity with a foreign loan from the floor of the Senate and defeated the possibility of obtaining the loan.[62] The provincial Minister of Finance submitted a project to the assembly incorporating features of the Vélez Sársfield and Riestra memorandums. However, the two chambers could not agree on the article referring to the foreign loan and the measure was tabled. At the same time a bill in Congress to provide for free banking institutions died because of inaction. One constructive step was taken by Congress just before it closed its sessions in 1863 when 7 million silver pesos in government bonds were created and an administrative board was established to supervise their issuance.[63]

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[59] *Rejistro Nacional,* V:23-9, #5895, May 21, 1863.

[60] *Ibid.,* 31, #5908, June 3, 1863.

[61] The issues of 1859 and 1861 were reduced in the following manner:

December 1862	128,415,000	August 1863	105,210,000
March 1863	120,705,000	June 1863	109,360,000

Registro Oficial de la Provincia de Buenos Aires, 1863. Statements of the bank for March 16, June 8, and August 15, 1863.

[62] Remarks of Vélez Sársfield in Senate session of June 18, *La Tribuna,* June 19, 1863, p. 2. His speech does not appear in the *Diario de Sesiones de la Camara de Senadores de 1863,* since Vélez Sársfield did not submit a copy to the printers.

[63] *Rejistro Nacional,* V:108-9, #6043, November 16, 1863.

Despite the steadily rising national revenues,[64] the budget still showed a large deficit. In particular, the unexpected cost of civil war in the interior had created a wider gap than usual between expenses and revenues in 1863. The year closed with a deficit of 2,118,845.30 silver pesos, and the government found itself in a difficult position to meet current operating expenses.[65] Characteristic though not directly related to the financial situation was the unoccupied Ministry of Finance, vacated by Vélez Sársfield at the end of 1863 for personal reasons and unfilled for almost half a year. The shortage of funds in the treasury caused the government to restrict its spending even in fields essential to the well-being of the nation. Hardest hit was the Ministry of Public Instruction whose funds seemed to form the most vulnerable portion of the budget in times of emergency.[66] As a result, it was not until mid-1864 that small subsidies could be assigned to five of the most backward provinces to aid in the creation and maintenance of primary schools. In the Ministry of Interior, the government's road building program ran into serious difficulty when special bonds bearing 8 percent interest were not accepted by the public and a considerable program of communication improvements had to be postponed.[67]

Perhaps the most distressing measure advocated by the Minister of Interior at the beginning of 1864 was the suspension of subsidies to the provincial governments. Special arrangements had been made to aid the provinces of Entre Ríos and Buenos Aires when Mitre assumed the provisional national executive in 1862. Impoverished conditions, unpaid employees, accumulating debts, and dangerous political unrest

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[64] The revenues of the national government increased at the following rate: 1863, 6,478,682.34 silver pesos; 1864, 7,005,328.12; 1865, 8,295,-071.28. *Memoria presentada por el ministro de estado en el departamento de hacienda al Congreso nacional de 1865* and *de 1866*, iii.

[65] *Memoria presentada por el ministro de estado en el departamento de hacienda al Congreso nacional de 1864*, 22.

[66] *Memoria presentada por el ministro de estado en el departamento de . . . instrucción pública al Congreso nacional de 1864*, ix. "*Es en* este ramo [instrucción pública] de la administración en el que principalmente ha sido sentida la perniciosa influencia causada en la hacienda pública por las agitaciones que sufrieron algunas Provincias del Interior."

[67] *Memoria presentada por el ministro de estado en el departamento del interior al Congreso nacional de 1864*, xxxv.

resulting from such financial conditions demanded that some action be taken to aid other less fortunate provinces.[68] To meet such a situation, Mitre's government had allocated subsidies to each province averaging 12,000 silver pesos annually and granted special subsidies to cover emergencies such as the flood which occurred in Tucumán in February 1863.[69] The ravages of civil war hurt the interior provinces, and at the end of 1863, Córdoba, Catamarca and San Luis solicited additional subsidies from the national government, and Entre Ríos sought restoration of its subsidy which had been suspended during the session of Congress.[70] Though these requests had been granted, the serious financial shortage which faced the treasury at the beginning of 1864 caused the Minister of Interior, Guillermo Rawson, to suggest that the national deficit be reduced by asking the provinces to forego their subsidies for the year.[71] A circular addressed to the provinces asking their cooperation in the matter did not bring a heartening response,[72] but fortunately financial matters improved somewhat and the need for the measure passed during the course of 1864.

There was no doubt that by the end of 1864 the monetary situation of the Argentine nation had improved. The balance of trade was still unfavorable but the gap between imports and exports was narrower than it had been for several years

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[68] Letter from José M. del Campo, Tucumán, to Bartolomé Mitre, November 16, 1862, *Archivo del General Mitre*, XXVI:66. Letter from Antonio Garzon, Córdoba, to Bartolomé Mitre, November 30, 1862, *ibid.*, XXIV:268. Letter from Manuel I. Lagraña, Corrientes, to Bartolomé Mitre, January 14, 1863, *ibid.*, XXV:190.

[69] *Rejistro nacional*, V:3, #5808, January 15, 1863. Emergency subsidy of 10,000 pesos allocated to Tucumán, letter from Bartolomé Mitre, Buenos Aires, to José M. del Campo, February 28, 1963, *Archivo del General Mitre*, XXVI:70.

[70] *Memoria . . . del interior al Congreso nacional de 1864*, 213-24.

[71] Letter from Guillermo Rawson, Buenos Aires, to Bartolomé Mitre, January 12, 1863 [*sic*, 4], Cartas inéditas del Archivo del General Mitre, #10,331, Museo Mitre.

[72] The responses of the provinces appear in the *Memoria . . . del interior al Congreso nacional de 1864*, 228-58. Only Santa Fe renounced the subsidy; Mendoza, San Juan, Corrientes, and Tucumán presented pressing needs for a subsidy but agreed to surrender it if the national government insisted; the remaining provinces announced the impossibility of operating without the subsidy.

or would be for many years in the future.[73] The budgetary deficit at the end of the year amounted to 1,108,367.71 silver pesos, but this represented a decrease of almost one-half from the previous year.[74] The national government was enabled to satisfy its creditors for the expenses of the civil war of 1863 and meet current operating expenses by a loan of 1½ million silver pesos extended by several *porteño* financiers in combination with the Bank of London in Buenos Aires.[75] Finally, the national government had taken action to solve the problem of the paper money of Buenos Aires. An additional 5 million silver pesos in government bonds had been created to be turned over to the provincial bank in place of the monthly sum of 2 million paper pesos.[76]

Meanwhile, the provincial government had also attacked the problem of the fluctuating paper currency by the law of November 3, 1864, which fixed the value at 25 paper pesos to the silver peso (since the gold ounce was by definition the gold ounce of 16 silver pesos, the paper money theoretically was pegged at 400 to the ounce). Other articles in the law provided for the amortization of the paper money with the capital of the provincial bank, the remittances of the national government, and the revenues from the proposed sale of the Western Railroad and of 800 leagues of land on the frontier.[77] A suggestion for an internal loan of 4 million silver pesos was also incorporated in the plan of the provincial government to redeem paper currency. However, the internal loan was not floated and revenues from land sales were not forthcoming, so the proposed conversion of the paper money to metal-backed silver pesos was postponed throughout 1865.[78] Neither the

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[73] Eugenio Garzon, *L'Amérique Latine. République Argentine* (Paris, 1913, 3d ed.). Imports for 1864, 23,352,240 silver pesos; exports, 22,376,717.

[74] *Memoria . . . de hacienda al Congreso nacional de 1865*, xxxii, reported that this deficit would have been eliminated save for the emergency expenses occasioned by the outbreak of war in 1865.

[75] *Memoria . . . de hacienda al Congreso nacional de 1864*, Appendice III, xviilxix, April 28, 1864. Loan of 1½ million silver pesos at 1½ percent monthly interest to be repaid in monthly installments from June 1, 1864, to November 1, 1866.

[76] *Rejistro Nacional*, V:164, #6225, October 8, 1864.

[77] *Registro Oficial de la Provincia de Buenos Aires, 1864*, 123-5.

[78] O. Garrigos, *El Banco de la Provincia* (Buenos Aires, 1873), 145. Conversion was postponed by the laws of May 15 and October 6, 1865.

legislation of the provincial nor of the national government in the matter was thoroughly carried out, and the paper peso continued to plague financial administration until 1881, when a national currency was created.[79]

In February 1865, however, the ex-Minister of Finance, Vélez Sársfield, was able to write his friend, Domingo F. Sarmiento, who had left on a mission to the United States: "This nation enjoys an enormous progress. The secret of its prosperity has been the inaction of the government. Since Pavón five thousand houses have been built in the city. The town is filled with palatial residences, none of which existed when you left. In the countryside, the wealth is doubling each year."[80] A few months later, the Argentine nation was thrown into economic and political turmoil by the outbreak of the Paraguayan War, and our brief study must logically conclude with this event.

The examination of monetary developments in Argentina from 1852 to 1865 not only shows their influence on political events of those years, but also contains certain generalities experienced by other Latin American countries during their early growth. Argentina suffered an unfavorable balance of trade until the exportation of frozen and chilled meat and of wheat redressed the balance of trade at the end of the 19th century. In the interim, foreign investment and loans and the export of gold and silver paid for the difference between imports and exports. A budgetary deficit existed throughout the century, for the country lacked the wealth to support its administration. The only large source of government income was custom revenue; yet when Buenos Aires had the sole con-

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[79] An exchange office was opened in 1866 to redeem paper currency at 25 to a new gold peso, but it was forced to close its doors ten years later without having achieved stability of the paper peso. Nicolas Casarino, *El Banco de la Provincia de Buenos Aires en su primer centenario, 1822-1922* (Buenos Aires, 1922), 110, summarizes the situation: "Pero llegaron los períodos de alzas y bajas. En vano fueron prohibidos por la Constitución de la Provincia nuevas emisiones del papel moneda, creyendo con esto robustecer la situación de la moneda circulante. Graves acontecimientos internos, alteración profunda de la situación económica y financiera, la consiguiente emigración del oro, produjeron dificultades insalvables para la Oficina de Cambio."

[80] Letter from Dalmacio Vélez Sársfield, Buenos Aires, to Domingo F. Sarmiento, February 4, 1865, Archivo de Domingo F. Sarmiento, Carpeta II, No. 232, Museo Histórico Sarmiento, Buenos Aires.

trol of its collection, it barely covered the normal provincial operating expenses. War was a particularly ruinous process for an under-developed country; yet provincial and national governments annually allocated over fifty percent of their budgets to the Ministry of War. Successive governments met the budgetary deficit by internal and external loans and by the printing of paper money, a form of forced loan from the public. These measures supported by the hope for future economic expansion of the country enabled the administration to survive financially. Practices of this type of deficit financing in the period 1852 to 1865 were only a modest beginning for the seventies and eighties. Argentina's experience in this respect was similar to that of many other Latin American states in the 19th century; it was her good fortune that the Pampa contained the wealth to provide impetus for further expansion.

Trinidad and Ceylon: Two Profitable British Crown Colonies

By J. Fred Rippy

I

Near the end of the nineteenth century, while one of Europe's major wars was in progress, the British government seized two islands that were destined to bring rich rewards to British investors: Trinidad, off the northeast coast of Venezuela, and Ceylon, adjacent to India on the other side of the world, the one taken from Spain and the other from the Dutch Netherlands. In proportion to their size—less than 2,000 square miles in the first case and around 25,000 in the second—they turned out to be among the richest prizes ever added to the British Empire in so short a period. The full economic potentialities of these acquisitions were not disclosed, however, until several decades after the acquisitions were made.

British investors tried for many years without pronounced success to win profits from plantations engaged in large-scale tropical agriculture in Trinidad.[1] Accessible records of the plantation companies indicate rather trifling returns. Caroni Sugar Estates, for instance, organized in 1924, paid almost no dividends on its ordinary shares until 1946, and no more than 7.9 per cent for the half-decade starting with that year.[2] Trinidad Sugar Estates, founded in 1923, returned an annual

[1] Statistical data presented in this discussion have been compiled from two investment manuals published in London: *Stock Exchange Year-Book* and *Stock Exchange Official Intelligence*, the first since 1875 and the second from 1882 until it was merged with the first in 1934 under the new title of *Stock Exchange Official Year-Book*. Both are annuals and it has been necessary to thumb the pages of many volumes and make many computations; but, since both have exhaustive indexes of company names, page references will not be given, for, once the name of a company is ascertained, it can easily be traced through each number of these publications.

[2] This enterprise consolidated two older plantations whose financial records are not available; and Trinidad Sugar Estates, the next company mentioned, also acquired an old plantation which the manuals do not describe.

average of only 6.6 per cent during the first 28 years of its existence, on ordinary shares running from £175,000 to £195,000.

Somewhat more profitable were two earlier companies engaged in other activities. Trinidad Shipping and Trading Company, established in 1895, sent its ordinary shareholders a per-annum average of 7.7 per cent for 24 years before it went into voluntary liquidation in 1920. The par value of their investment was £72,000 in 1896, raised to £90,000 shortly before the firm was dissolved. Angostura Bitters, with its factory and bottling works in Trinidad but collecting some of its raw materials from Venezuela, made still higher returns. This firm, which deals in cordials and "home remedies," was organized in 1909 with a capital of £85,000 in ordinary shares and the same amount in preference, the latter being 6 per cent cumulative and participating. During the 41 years starting in 1910, Angostura Bitters paid an annual average of 8.9 per cent on its ordinary and more than 9 on its preference, while for the five years beginning with 1946 ordinary shareholders received an annual average of 24 per cent and holders of preference shares a per annum of 10 per cent.

The big profits, as one might expect, came from oil wells. Large petroleum lakes underlie the entire southern portion of Trinidad and at least half of the British companies operating there have prospered. On ordinary shares with a par value running from approximately £285,000 up to £300,000, Trinidad Central Oilfields paid an annual average of 6.1 during the 32 years that began with 1919, and the per-annum dividend for the last five years of the period averaged 16.5 per cent. United British Oilfields of Trinidad rewarded its ordinary shareholders with an annual average of 7.2 per cent for the quarter of a century following 1925 on securities with a face value expanding from half a million to a million and a half; and for the years 1946-50, inclusive, the per-annum average rose to 9.5.

But the profits of these two companies were dwarfed by those of three others operating in the island. On ordinary shares ballooning from a par value of £100,000 to £1,000,000, Trinidad Petroleum Development Company returned a per-annum average of 14.7 per cent during the 19 years beginning with 1932, averaged 15.7 yearly for the last five years of the period, and paid a dividend of 16.5 in 1951. Trinidad

Leaseholds, on ordinary shares with a par value rising from £429,500 to £1,639,452, returned an annual average of 15.9 for the 33 years starting in 1918; and Apex (Trinidad) Oilfields was still more profitable, rewarding the holders of its ordinary shares—expanding from £400,000 to £550,000—with an annual average of 32.7 per cent for 29 years (1922-50).

These three were among the ten or fifteen most profitable petroleum companies British investors ever owned. In size of returns they compare favorably with Anglo Egyptian, Anglo-Iranian, Burmah Oil, Lobitos Oilfields (Peru), Mexican Eagle, Shell Transport and Trading Company, and Venezuelan Oil Concessions. In the case of Trinidad, empire was beginning to pay at least a few investors.[3]

II

Available information regarding the earnings of early British economic organizations in Ceylon, as in the case of Trinidad, is rather scarce.[4] Britishers are said to have made handsome profits from coffee plantations for several decades until a leaf blight interfered in the 1880's. Then they turned to tea and rubber and eventually prospered as in few other parts of the Empire. Their plantations covered a good part of the island and, at one time or another, most of them grew both rubber and tea, so that the names of the plantation companies give no reliable indication of which product was being emphasized.

Approximately 200 companies were registered in the British Isles between 1880 and 1950 for the purpose of growing tea and rubber in Ceylon, and very few of them failed to pay yearly average dividends of as much as 10 per cent for a decade or two. Table 1 sets forth the dividend records of twenty tea companies which yielded annual averages of 15 to

[3] Statistics on yields given in this summary take no account of capital losses, which were rare, or stock bonuses, which were fairly large in some instances, or of "watered stock." Trinidad also has considerable natural asphalt, but investors from the United States seem to have controlled the asphalt production there as well as in Venezuela.

[4] *Stock Exchange Year-Book* lists only 8 British plantation companies active in Ceylon for 1886 and no more than 12 for 1891, but it lists 53 for 1900, describes 149 for 1916, around 136 for 1920, and 115 for 1950. Capitalization, mostly in ordinary shares, had an aggregate par value of £9 to £16 million after 1900 and was near its peak in 1928.

slightly more than 38 per cent for time spans running from 42 to 64 years. Dates of company organization are given in parentheses and the par value of the ordinary shares of each enterprise is included in order to convey an idea of the size of the investment.

These were remarkably profitable companies. Nine of the group rewarded their shareholders with annual averages of more than 20 per cent, not including share bonuses, amounting to from 25 to 200 per cent, which twelve of the twenty corporations distributed (between 1919 and 1928, as a rule). Moreover, returns in recent years were still high, as indicated by the last column in this table, which shows that only one of the twenty dropped below a per-annum average of 11 per cent for the lustrum starting with 1946. In fact, the majority paid yearly averages running from 19 per cent up to 34 per cent during this recent half-decade.

The most fantastic statistics appear in column six, which contains the annual average for each company during its

TABLE 1

A Sample of the Most Profitable British Plantation Companies in Ceylon

Company	*No. of Years*	*Initial Year*	*Annual Average*	*Highest Five Years*	*Annual Average*
Balmoral Estates (1898)	47	1904	24.2%	1924-28	51.0%
Bandarapola Ceylon (1892)	47	1904	16.7	1922-26	45.0
Battalgalla Estate (1889)	45	1906	22.6	1924-28	74.0
Ceylon Planters' Assoc. (1897)	44	1907	15.0	1923-27	42.0
Ceylon Land and Produce (1884)	59	1892	18.4	1922-26	35.0
Ceylon Tea Plantations (1886)	64	1887	23.6	1912-16	50.0
Consolidated Estates (1891)	44	1907	24.2	1915-19	53.0
Eastern Produce (1888)	47	1904	17.9	1924-28	42.0
Kelani Valley (1886)	58	1893	15.6	1912-16	46.0
Mooloya Estates (1897)	42	1909	22.1	1922-26	60.4
New Dimbula (1899)	52	1899	26.9	1923-27	53.0
Namunakula Tea Estate (1894)	44	1907	16.4	1923-27	56.0
Nuwara Eliya Estates (1895)	52	1899	17.2	1924-28	44.6
Panawal Tea (1893)	53	1898	16.1	1922-26	49.5
Pelmadulla Rubber (1905)	46	1905	19.5	1922-26	39.0
Scottish Ceylon Tea (1889)	61	1890	16.4	1924-28	50.0
Spring Valley Ceylon (1865)	45	1906	17.2	1922-26	47.0
Standard Tea (1891)	59	1892	24.3	1923-27	60.0
Sunnygama (1893)	47	1904	21.7	1912-16	63.0
Ukuwela Estates (1899)	48	1903	38.1	1924-29	128.0

PAR VALUE OF ORDINARY SHARES AT BEGINNING AND END OF DIVIDEND PERIOD

Company	*Beginning*	*End*	*Annual Average 1946-50*
Balmoral Estates	£ 52,035	£ 52,035	27.6%
Bandarapola Ceylon	26,850	60,000	11.0
Battalgalla Estate	15,000	45,000	25.0
Ceylon Planters' Association	40,000	66,000	11.8
Ceylon Land and Produce	37,500	141,000	19.0
Ceylon Tea Plantations	122,000	386,000	25.0
Consolidated Estates	50,000	302,500	18.0
Eastern Produce	298,250	333,000	19.3
Kelani Valley	18,765	35,000	16.5
Mooloya Estates	30,000	50,000	16.5
New Dimbula	78,954	259,390	32.0
Namunakula Tea Estate	35,200	70,400	13.1
Nuwara Eliya	200,000	368,813	19.2
Panawal Tea	17,000	22,100	9.4
Pelmadulla	16,625	138,418	27.6
Scottish Ceylon Tea	41,000	88,221	21.8
Spring Valley Ceylon	80,000	140,000	14.0
Standard Tea	36,800	141,500	34.0
Sunnygama	50,000	75,000	16.0
Ukuwela Estates	7,550	7,550	25.0
Total	£1,253,529	£2,781,927	

most flourishing consecutive five years, usually in the middle 1920's, but earlier in three instances. Not one of the twenty companies yielded an annual average of less than 35 per cent during its most prosperous half-decade. Eighteen averaged above 42, two averaged exactly 50, and the per-annum averages of nine ran from 51 up to 128! In other words, the ordinary shareholders of the majority of these twenty tea corporations recovered twice their investment during a single lustrum and received handsome dividends besides. And let it be remembered that these twenty corporations are about a tenth of all the corporate enterprises registered in Great Britain during the seven decades following 1880 for the purpose of operating plantations in Ceylon and around a sixth of those operating there in any decade since 1900.

But these were by no means the only profitable tea corporations owned by Britishers in Ceylon. They were, and are,

TABLE 2

OTHER PROFITABLE BRITISH PLANTATION COMPANIES IN CEYLON

Company	*Annual Average 1911-50*	*Annual Average 1946-50*	*Highest Five Years*	*Annual Average*	*Yield 1950*
Anglo-Ceylon	15.6%	24.5%	1917-21	26.0%	30.0%
Bogawantalawa	15.4	9.8	1923-27	35.5	15.0[10]
Carolina	13.3	9.5	1923-27	47.0	17.5
Central Province	11.2	13.8	1926-30	17.3	15.0
Ceylon Estates Investment	15.1[1]		1924-28	37.0	
Ceylon Para Rubber	19.7	23.0	1923-27	52.0	60.0
Ceylon Proprietary Estates	12.8	12.2	1923-27	30.0	22.5
Craighead Tea	15.0	9.6	1923-27	35.0	12.0
Demodera Tea	20.2[2]	24.1	1922-26	41.0	30.0
Dickella Rubber Estate	14.4[3]		1923-27	30.0	
Dimbula Valley Tea	16.2	10.0	1923-27	32.0	12.5
Duckwari Tea and Rubber	21.5	34.0	1924-28	65.0	37.5
East India and Ceylon Tea	11.0	11.8	1923-27	31.0	25.0
Ederapolla Tea	13.8	13.5	1922-26	38.5	32.5
Ellawatte Ceylon Estates	16.5	12.7	1923-27	26.2	20.0
Elmhurst Tea and Rubber	11.4	18.2	1925-29	35.0	25.0
Galaha Ceylon Tea	12.8	12.0	1924-29	25.5	15.0
General Ceylon Rubber	11.2[4]		1912-16	25.5	
Hanipha Tea and Rubber	14.6	10.6	1924-28	44.0	15.0
Hattangalla Tea and Rubber	11.7[5]	5.2	1915-19	21.0	10.0
Highland Tea	12.6	12.8	1924-28	27.0	16.0
Hornsey Tea Estates	15.2	16.0	1926-30	37.0	20.0
Kandapolla Tea	14.2[6]		1924-28	42.0	
Kintyre Tea Estates	13.7	13.0	1925-29	26.5	15.0
Lindoola Tea	10.0	10.0	1926-30	34.0	10.0
Lunuva Tea and Rubber	12.2	16.0	1923-27	23.5	20.0
Maturata Tea and Rubber	15.9[7]	18.7	1922-26	28.0	12.5
Mayfield Dimbula Tea	16.3	16.1	1924-28	37.0	15.0
Mount Vernon Tea	16.1	15.0	1923-27	34.0	20.0
Ouvah Ceylon Estates	14.9	17.9	1924-28	32.5	25.0
Pantiya Tea and Rubber	12.9	7.5	1924-28	29.0	25.0
Parambe Rubber and Tea	10.7	13.7	1922-26	23.5	40.0
Portmore Tea	16.6[8]		1925-29	37.4	
Pundaloya Tea	16.4	13.0	1925-29	39.0	17.0
Ragalla Tea Estates	15.4	12.2	1925-29	28.0	15.0
St. George Rubber Estates	14.3	17.0	1915-19	38.0	45.0
Scottish Tea and Lands	17.4	21.8	1923-27	43.2	30.0
South Wanaraja Tea	13.8	13.5	1921-25	30.0	25.0
Talawakelle Estates	18.2[9]		1925-29	31.0	
Telbedde Ceylon Estates	25.8	16.5	1923-27	77.0	25.0
United Planters' Co.	15.4	10.8	1924-28	49.5	20.0
Vellikellie Tea	13.8	11.0	1924-28	28.0	15.0

[1] For 1911-45. [4] For 1910-50. [7] For 1912-50.
[2] For 1918-50. [5] For 1912-50. [8] For 1905-38.
[3] For 1910-45. [6] For 1911-46. [9] For 1909-48.
[10] For 1950; blanks in this column indicate incomplete returns or extinct companies.

merely those with the highest dividend records for time spans running above 40 years. Table 2 exhibits more than twice as many with yearly average yields of from 10 to 25.8 per cent for slightly shorter periods. Of the forty-two corporations included in this table, twenty struck medians of 15 per cent and above for a period of some four decades following 1910. Only one of them fell below an annual average of 21 per cent for its most prosperous consecutive five years, and even this one dropped no lower than 17.3. Thirty-one of the group averaged from 30 per cent up to 77 annually during this half-decade, thus recouping their entire capital after subtracting a fairly good dividend. And note, again, that these figures make no allowance for paper bonuses sent to shareholders, usually in the 1920's, by at least a third of the group, bonuses running from 20 to 200 per cent.

Table 2, like Table 1, also shows good returns for recent years. Thirty-six of the forty-two corporations listed—five had been dissolved and complete returns are lacking for one—sent their ordinary shareholders annual averages ranging (with two exceptions) from 9.5 to 34 per cent for the lustrum beginning with 1946 and dividends of from 10 to 60 per cent in 1950, the majority of them paying 20 per cent and above for that year.

The sixty-two companies dealt with in these two tables represent nearly a third of all the corporate enterprises organized in the British Isles since 1880 for the purpose of engaging in tropical agriculture in Ceylon and fully half of the average number operating there since 1900. Most of the others returned average dividends of 5 to 9 per cent annually during the forty years terminating in 1950. The median for the entire group, taking no account of stock bonuses, must have been around 15 per cent for the four decades, even including small issues of debentures and preference shares, which customarily paid only 5.5 to 7.5 per cent.

III

Such were the profits garnered by British investors from two very profitable crown colonies. This summary will now be concluded with a contrast, in order to present a more balanced view of the size of the returns from these smaller

segments of the Empire. British North Borneo will serve this purpose as well as any other British possession.[5]

British North Borneo was ruled by the British North Borneo Company, created by royal charter late in 1881, from the early 1880's until 1946, when the company's assets and sovereign rights were acquired by the British crown for the sum of £1,400,000. Among its original directors were a lord, two knights, and a rear admiral. A proprietary company, it was probably primarily interested in profits, but returns to its stockholders were very meager. During the 67 years following 1881 the average annual dividend on paid-up ordinary

TABLE 3

A Sample of the Most Profitable British Enterprises in North Borneo

Company	*No. of Years*	*Initial Year*	*Annual Average*	*Highest Five Years*	*Annual Average*
Bangawan Rubber	41	1910	2.8%	1924-28	7.3%
Beaufort Borneo Rubber	44	1907	3.5	1925-29	12.0
British Borneo Para Rubber	45	1906	4.9	1925-29	17.0
Kimanis Rubber	41	1910	3.9	1923-27	9.5
Lok Kawi Rubber	42	1909	4.4	1924-28	23.5
Manchester N. Borneo Rubber	45	1906	4.5	1924-28	27.0
Marudu Rubber	35	1916	3.7	1936-40	12.2
Membakut Estates	42	1909	3.6	1916-20	8.2
New London Borneo Tobacco	34	1893	7.6	1899-1903	20.7
Sablas Rubber	27	1910	3.7	1917-21	6.4
Sapong Rubber Estates	40	1911	7.6	1923-27	28.6
Sekong Rubber	41	1910	2.0	1923-27	6.6
Tenom Rubber Estates	45	1906	5.0	1915-19	16.5
Tuaran Rubber Estates	31	1920	6.8	1923-27	31.0
British Borneo Timber	31	1920	3.6	1936-40	7.6
Borneo (trading)	37	1914	6.5	1914-19	24.0
North Borneo Trading	41	1910	3.0	1946-50	8.0
British Borneo Petroleum	28	1923	11.4	1946-50	12.3

[5] Two other portions of this big island had been, in effect, parts of the British Empire since 1888, when they became protectorates: Sarawak, governed by members of the English Brooke family as Rajas, and Brunei, a crown colony since 1906. But this discussion will be confined to business enterprises operating in North Borneo and to companies listed and described in the various issues of *Stock Exchange Year-Book*. The area of North Borneo is about 30,000 square miles; its population now numbers some four hundred thousand, including a good many Chinese.

NOMINAL CAPITAL IN ORDINARY SHARES AT BEGINNING AND END OF THE DIVIDEND PERIOD

	Beginning	*End*	*Yield in 1950*
Bangawan Rubber	£125,000	£148,770	6.0%
Beaufort Borneo Rubber	75,000	180,000	5.0
British Borneo Para Rubber	22,950	50,000	nil
Kimanis Rubber	100,000	183,000	15.0
Lok Kawi Rubber	100,000	89,704	5.0
Manchester North Borneo Rubber	120,000	165,000	nil
Marudu Rubber	12,000	6,500	10.0
Membakut Estates	100,000	130,000	10.0
New London Borneo Tobacco	80,000	110,000	
Sablas Rubber	143,750	240,783	
Sapong Rubber Estates	72,428	120,000	25.0
Sekong Rubber	63,112	15,000	nil
Tenom Rubber Estates	21,500	107,300	10.0
Tuaran Rubber Estates	80,000	87,800	nil
British Borneo Timber	200,000	180,000	20.0
Borneo (trading)	300,000	600,000	10.0
North Borneo Trading	97,645	125,500	10.0
British Borneo Petroleum	140,000	250,000	14.0

shares, ranging from approximately £400,000 at the outset to £1,852,385 in 1948, was less than 2 per cent. At certain periods debenture issues were as large as the share capital; but these paid only 4.5 and 5 per cent annually. When the company was liquidated in 1949 the holders of its ordinary shares suffered a loss of about 60 per cent of the par value of their investment. The best per-annum average for any five years in succession was only 4.8 per cent (from 1908 through 1912).

The British North Borneo Company tried to exploit the resources of its domain by sponsoring[6] several economic organizations, more than 30 all told; but the majority of these were likewise unprofitable. Table 3 exhibits the records of 18 of the most remunerating, the majority of them plantation companies, all of which, with one exception, were growing rubber.

[6] The ruling company guaranteed dividends of from 4 to 6 per cent on a stipulated capital for from three to six years from the time each new company began operating.

Compared with the returns from enterprises operating in Trinidad and Ceylon, dividends paid by these North Borneo companies seem insignificant. Only four of the 18 companies dealt with yielded annual averages of more than 5 per cent for the periods covered; and two of these four—Borneo Company and British Borneo Petroleum Company—did not limit their business to North Borneo. It should be observed, however, that six of the 18 more than recouped their original investment during their most prosperous five years; that the majority of the group (two had been absorbed by other corporations)[7] paid good dividends in 1950; and that, while three of them suffered capital losses, some seven or eight expanded their capital considerably by distributing share bonuses. And it should also be noted that these and other British companies in North Borneo might have treated their shareholders somewhat better if the vicissitudes of the second World War had not deprived them of from five to eight years of profits. Nevertheless, it must be concluded that investments in this segment of the British Empire were not very profitable.

[7] Sablas Rubber was absorbed by Kimanis Rubber in 1937 and New London Borneo Tobacco Company was reorganized in 1927 under the title of Marudu Consolidated Estates. Although Marudu Consolidated was a failure, a few of the British tobacco plantations in North Borneo are said to have prospered during earlier years. *Stock Exchange Year-Book* throws little light on the subject, listing only two or three other tobacco companies besides those mentioned. London and Amsterdam Borneo Tobacco Company, founded in 1893 and reorganized two years later, returned almost no dividends and was liquidated in 1910. Darvel Bay Tobacco Company, created in 1889 and reorganized in 1892, finally began to yield profits in 1897, paying 4.6 per cent on its ordinary shares for that year and averaging 8.2 per cent annually for the next two decades, but seldom making any payments thereafter and dissolving in the early 1930's.